THE VOLUME-TO-VALUE REVOLUTION

JULY 20, 2014

Adrian Slywotzky
Value Migration®
Value Migration®

US Steel
US Airways
Sears
Compaq
Motorola

Nucor
Southwest Airlines
Walmart
Dell
Nokia
No profit zone: Airline industry example

Industry net profit

Source: Air Transport Association of America.

+46.54/–58.50
Evolving no profit zones

- Airlines
- Consumer electronics
- PCs
- Homeowner’s insurance
- Cars
- Beverage in grocery
- Films
- Agriculture
- Environmental remediation
- Lots of manufacturing
Are there any evolving no-profit zones in healthcare?

• 2014?

• 2017?
Market share – a very tricky idea
Automotive – 1970s

Profitability vs. Market share graph showing:
- Chrysler
- Ford
- GM

Profitability:
- 0%
- 5%
- 10%
- 15%

Market share:
- 0%
- 10%
- 20%
- 30%
- 40%
- 50%
Automotive – 1990

![Profitability vs. Market share graph for Chrysler, Ford, and GM in 1990](image-url)
Automotive – 2002

[Graph showing profitability vs. market share for Chrysler, Ford, and GM]
Automotive – 2008

Profitability vs Market share graph showing Chrysler, Ford, and GM.
My business design

Customer selection

Unique value proposition

Profit model

Strategic control

Scope

Organization
The biggest problem in business ...

is staying with your previously successful business model one year too long.
Why is it …

that the mental model of industry leaders lags the market by 2–3 years?
What happens when industries collide?
The Four-Chain World consumer

Jennifer Stone: 50-year-old, small business owner
The Four-Chain World consumer

Jennifer Stone: 50-year-old, small business owner
Managing my business

Jennifer Stone: 50-year-old, small business owner

Bloomberg
Get updated information for stocks and markets

iXpenseit
Create expense reports and summaries

Omni Invoice
Generate sales quotes and customer invoices

OmniFocus
Track tasks by project, place, person, or date

Streamtime
Track customer information

FileMagnet
Wirelessly transfer files from desktop computer

iSpreadsheet
Create, edit, and share spreadsheets

LinkedIn
Access your professional network and contacts

iShare
Connect to Microsoft SharePoint Server

Oracle Business Approvals for Managers
Make intelligent business decisions on the go

Managing my business
Jennifer Stone: 50-year-old, small business owner
Starting to manage my health?

- RunKeeper
- WebMD
- ZocDoc
- iTriage
- SparkPeople
- First Aid by American Red Cross
- Healthy Diet & Grocery Food Scanner
- The Eatery
- Weight Watchers Mobile
- Kaiser Permanente
- Map My Run
- CVS Caremark
- Healthline
- My Pregnancy Today
- Healthy Diet & Grocery Food Scanner
- AARP Magazine
- Rite Aid
- HealthTap
- Nike+ Running
- Restaurant Nutrition
Bloomberg’s little box/big box value proposition
The financial trading frustration chain: life without/with Bloomberg

Without Bloomberg:

- Multiple connections/subscriptions
- Multiple logins
- A la carte pricing
- Many screens and computers
- Incomplete information
- Data comparison/download problems

With Bloomberg:

- Single comprehensive platform
- Sleek dual-screen terminal
- Easy to manipulate: access and downloading
The trader’s terminal

• 30,000 functions
• Consistent/comparable data
• Analytical templates
• Creating algorithms

“I have all I need at my fingertips.”

The physician’s desktop?

• Patient history
• Predictive modeling
• Best protocols
• Best process controls/checklists
• Diagnostic algorithm

What would the physician say?
## Value Migration®
### Four-Chain World

<table>
<thead>
<tr>
<th></th>
<th>2000 value</th>
<th>2010 value</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 Leaders</td>
<td>$2.6 trillion</td>
<td>$1.6 trillion</td>
</tr>
<tr>
<td>11 Cross-chain players</td>
<td>$80 billion</td>
<td>$1 trillion</td>
</tr>
<tr>
<td>Share of value</td>
<td>3%</td>
<td>40%</td>
</tr>
</tbody>
</table>
The Four-Chain World is really about the customers, not about industry value chains.
The customer’s hassle map
The key point of the Four-Chain World

• Start with the customer

• Ask:
  – Who owns the hassle map of the customer?
  – Connect the dots to fix it.
  – Who is improving it the most quickly?
The laws of perception: What do you see?

“Cool device”

- “Huge threat to my business”
- “Huge opportunity to create better experience for the customer”
What new things will my team have to learn in the next three years?
Market capitalization: Sony versus Apple

$ BB

1999 2001 2003 2005 2007 2009 2011

Sony

Apple

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Value Migration®: Market capitalization
“Different clocks"
The Second Half of the Game
King Kong vs. Godzilla
Four chains to eight

Tech

Telco

Media

Consumer electronics

Tech

Telco

Media

Consumer electronics

Retail

Education

Financial services

Healthcare
Healthcare convergence

• Cross-chain competition
• Hassle map
• The upside-down pyramid
• Capacity dislocations
• Compete/collaborate ratio
Tech

- iPhone/iPad apps – iTriage
- Android ecosystem
- WellTok
- Castlight Health
- Cisco Telehealth
- IBM Watson
- Google
Retail

<table>
<thead>
<tr>
<th></th>
<th>Market cap</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walmart</td>
<td>200 BN</td>
<td>500 BN</td>
</tr>
<tr>
<td>CVS</td>
<td>60 BN</td>
<td>100 BN</td>
</tr>
<tr>
<td>Walgreen’s</td>
<td>30 BN</td>
<td>70 BN</td>
</tr>
<tr>
<td>Kroger</td>
<td>13 BN</td>
<td>90 BN</td>
</tr>
<tr>
<td>Rite-Aid</td>
<td>2 BN</td>
<td>25 BN</td>
</tr>
<tr>
<td>Target</td>
<td>40 BN</td>
<td>70 BN</td>
</tr>
<tr>
<td></td>
<td>~ 350 BN</td>
<td>~ 900 BN</td>
</tr>
</tbody>
</table>

Q: What is retail?

A: $900 BN looking for growth
Retailers

• Drugstores solved growth problem with cosmetics
• Discounters with grocery
• Both need more
• They think differently:
  – Sales per square foot
  – Foot traffic
  – Inventory turns
  – GM/square foot
• Now they’re starting to think Share of Wallet.
• They have the cards. They want more.
Retail: Rapid evolution

- Acute episodic, flu shots
- Kiosk/information
- Wellness programs distribution
- Telehealth
- Simple coordination (with PCPs)
- Diagnostics
New sources of competition for value

- Tech/Telco: “They love hassle maps”
- Healthcare
- Retail: “They love high costs”
Even the toughest hassle maps are opportunities
U.S. healthcare

- Costly senior care
- Expensive co-pays
- Expensive hospitalization
- 15-20 medications
- Complicated referrals
- Multiple specialists

- Risk of adverse selection death spiral
- Redundant treatment
- Small margin for Medicare patients
- Emergency? Call 911

- Health Plan
  - Denial of coverage
  - Need to minimize costs
  - Hard to find quality docs
  - Too many patients, too little time
  - No time or $ to talk end of life

- No Coordination of Care
  -_emotionally attached
- Problems go unnoticed
- Can’t Drive
- Miss Appointments
- Conflicting treatments

- Patient

- Doctors
  - Hard to fit patients in schedule
  - No holistic care
  - Lack resources to manage chronic illnesses
  - More billing staff than nurses
  - Byzantine billing
  - Staff focused on costs, not prevention

- Professional frustration

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Afghanistan Stability/COIN Dynamics
Healthcare = Hassle Map Heaven
• Ellen
• Dan
• Joe
# How do we reduce hospitalizations for CHF patients?

## Fee-for-service

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 7</th>
<th>Day 13</th>
<th>Day 14</th>
<th>Days 14–19</th>
<th>Day 19+?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid build up</td>
<td>Difficulty breathing, onset of edema</td>
<td>Cough up frothy sputum</td>
<td>Call 911 &amp; emergency room</td>
<td>Ventilator, drugs, cardiac catheter</td>
<td>Permanent damage, on oxygen indefinitely?</td>
</tr>
</tbody>
</table>

- **Hospital**
  - Fluid build up
  - Steps on wireless scale, +3lbs
  - CareMore nurse calls, makes appt, sends car
  - Sees NP, new Rx
  - Crisis passes

- **CareMore Clinic**
  - Quality of life maintained
  - Cost: $600

- 56% FEWER READMISSIONS

Source: Interview with Alan Hoops, CareMore Senior Medical Officer and CEO respectively, conducted by Adrian Slywotzky and Karl Weber (08/10/2010); Zipprich, Bernard, “Interview with Dr. Carlos Cowley, cardiologist,” (10/5/2010); 56% figure comes from “Delivering Integrated Patient Care for Seniors,” CareMore (11/2008), p. 35
Geisinger – Standardization

- Consultation
- Diagnostic tests
- Pre-op prep
- Procedure
- Recovery days
- 90 days post-op follow-through

$112K

- One invoice/one price
- One point of accountability
- Pro-patient standardization

$88K
The upside-down pyramid

**Patients**

- 5% Polychronic, end of life
- 20% At-risk for major procedures (e.g. cardiology, oncology)
- 75% Healthy, minor health issues

**Costs**

- 20% Healthy, minor health issues
- 75% At-risk for major procedures (e.g. cardiology, oncology)
- 5% Polychronic, end of life

**Innovations**

- 45% Coordinated care, prevention, compliance, hospice, capitated payment
- 35% Fixed bundled payments, EBM, standard protocols, checklists
- 20% Financial incentives to stay fit, health screenings, convenient access
Employers

• Transfer risk: Deductibles and donut holes
• Information
• Incentives
• Support, coaching
• Experimentation
• Culture
• Self-reinforcing upward spiral
Great employers are already connecting with great providers to get radically better outcomes for their employees:

• Lowes with Cleveland Clinic

• IBM with providers in Arizona

• Boeing experimenting with providers in Seattle
A cascade of capacity dislocations

- Retail → General practitioners
- Care teams → Hospitals
  - (+ Tech + Retail) → Hospitals
  - → Specialists
What will happen to competitive intensity?

- Internal competition ↑
- Cross-chain competition ↑
- Risk of downward spiral

Recall 2.6 → 1.6
Business design challenges

• Hospitals — New revenue

• Medical groups — ACO plus profit model

• Insurers — What’s my next big piece of value added?

• Retailer — *Profitable* growth
Compete/collaborate: Timing

Change the compete/collaborate ratio soon enough to make a difference
## Compete/collaborate: Ratio

<table>
<thead>
<tr>
<th>Compete</th>
<th>Collaborate</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>90</td>
<td>10</td>
</tr>
<tr>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

- What is the compete/collaborate ratio in my industry today?
- What should be my compete/collaborate ratio?
“Where do we allocate capital to activities that give us no differentiation?”
Collaborations

Tech/Telco

Healthcare

Retail
Globalization: Informational economics

- Mobile ecosystem – Not a regional business
- Telehealth – Not a regional business
- Social networking – Not a regional business
- Watson – Not a regional business
- Genomics – Not a regional business

When intensely regional (HC) meets intensely global (info), global wins.
Market 2.0

- Care Teams
- Open Exchanges
- Quantified Self
NCQA PCMH growth

- Clinicians: 27,820
- Sites: 5,739

ACO growth

- Clinicians: 606

Note: Clinicians include physicians, physicians' assistants, and nurse practitioners

Source: Leavitt Partners Center for Accountable Care Intelligence
The power of the extended care team
Leverage: Adding ultra-low-cost capacity to smart care teams

The Resource Pyramid

PCMHs
- Doctors
- Nurses
- Behaviorists
- Medical Assistants

Smart Care Team
- Retail
- Telehealth
- Self-directed consumers
- MA
- B
- N
- D

- A much broader base for the pyramid
- “Top of license” on steroids
- Costs significantly lower

Prevention Excellence
Momentum building …

Number of rounds over $2M

Source: Crunchbase data referenced at http://techcrunch.com/2014/01/15/vcs-investing-to-heal-u-s-healthcare/
Note: Healthcare software and apps company early stage funding.

Digital health funding growing at nearly 30% per year

Venture funding of digital health companies

Note: Only deals >$2M.
Critical mass investments

Total capital raised among those who have raised at least $25M = $2.0 Billion since 2011

Source: Rock Health
The tech attack

- Scale
- Momentum
- Critical mass/company
- Consumer relevance
- Silicon speed
Who’s at the edge of our radar screen?

- Hospital systems
- Medical groups
- Insurers
- Competitors for value?
- Good ideas?
- Great partners?
The Quantified Self

Biosensors

Apps

Crowd Sourcing

Social Networks

Mobile

Exchanges

Retail

Competition/Games

The “Engaged Consumer”

The “Quantified Self”

Health IQ
Changing lifetime trajectories

- Care team prescribes coaching, diet, exercise program
- Biosensors, light weight training, strength and stretch training
- Psychologist catches early depression, addresses it
- Nutritionist helps craft better diet to promote good weight
- PCP addresses high cholesterol with an Rx
- Occasional home care visits help maintain independence
- Undiagnosed depression; pre-hypertensive
- Overweight, diabetic, high blood pressure, undiagnosed depression
- Over weight, diabetic, high blood pressure, depression, CHF
- Poly-chronic, severe mobility impairment, depression, in skilled nursing facility
- Fully mobile

Changing lifetime trajectories

Health status migration

Lifetime
## Oklahoma Surgery Center

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Surgery Center of Oklahoma</th>
<th>Competitor price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast biopsy</td>
<td>$3,505</td>
<td>$16,244</td>
</tr>
<tr>
<td>Hernia repair</td>
<td>$3,200</td>
<td>$17,200</td>
</tr>
<tr>
<td>Carpal tunnel release surgery</td>
<td>$2,750</td>
<td>$7,452</td>
</tr>
<tr>
<td>Gall bladder removal</td>
<td>$5,865</td>
<td>$21,556</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>$8,000</td>
<td>$37,174</td>
</tr>
</tbody>
</table>

### Infection rates

- **Average hospital**: 3 – 6%
- **Average ambulatory surgery**: 2.6%
- **SCO**: .5%
Extreme price variations happen everywhere and for every type of procedure.
Source: CMS claims data for 0267 - Level III Diagnostic and Screening Ultrasound
* Estimated savings relative to total bill submitted to CMS
Note: Capping reimbursement at the market median could reduce prices by 23%* for these tests
Average estimated submitted charges vs. outpatient discharges across US

<table>
<thead>
<tr>
<th>Source: CMS claims data for 0267 - Level III Diagnostic and Screening Ultrasound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average price</td>
</tr>
<tr>
<td>Median price</td>
</tr>
<tr>
<td>Minimum price</td>
</tr>
<tr>
<td>Maximum price</td>
</tr>
</tbody>
</table>
Mechanisms

• Calpers
• Walmart
• SCO
• Castlight Health
• ACO physician referrals
Transparent markets
Exchange evolution

Conventional insurance

Health Plan A

Health Plan B

Health Plan C

Consumers select their primary medical home as front door to the systems

Commercial Patient Centered Medical Home (PCMH)

Polychronic PCMH

Mental Illness PCMH

Disease Specific PCMH

Frail/elder/hospice

ACO/Health System

Population Health & Smart Care Teams

Consumers shop for retail services with price/value transparency

Transactional Care

Surgical services

Diagnostic services

Procedural care

Vision/optical

Dental services

Urgent care

Acute/Episodic Care

Virtual Care

Consumer healthy living

Healthy Living

Retail pharmacy

Healthy Meals

Wearables

Health apps

Fitness/wellness

Monitoring services

Health/wealth

Ancillary insurance

Population health managers pull key health/wellness/engagement services into model

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## Business model alternatives

<table>
<thead>
<tr>
<th>Category</th>
<th>Design #1</th>
<th>Design #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM’s Watson</td>
<td>Technology licensor</td>
<td>• “Bloomberg” for health professionals</td>
</tr>
<tr>
<td>iWatch</td>
<td>Cool device</td>
<td>• iPhone-like health ecosystem</td>
</tr>
<tr>
<td>Care team</td>
<td>Medium-term prevention (reduced hospitalization, reduced specialist usage)</td>
<td>• Invest in biosensors, big data, Watson, genomics, coaches to add “20 more good years”</td>
</tr>
<tr>
<td>Hospital</td>
<td>Cost-cutting, consolidation</td>
<td>• Partner with and co-create smart care teams</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Clinic</td>
<td>• Clinic + telehealth + health coaches + care teams</td>
</tr>
<tr>
<td>Payor</td>
<td>Insurer</td>
<td>• Consumer health company</td>
</tr>
</tbody>
</table>

- What *other* important new business models will emerge/are emerging already?
- How effective are they?
- Which ones do a great job for consumers *and* investors?
- Which ones would you *invest* in? And why?
When do I expect the inflection point to happen?  

<table>
<thead>
<tr>
<th>Event</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure price umbrella collapse</td>
<td></td>
</tr>
<tr>
<td>Watson goes mainstream</td>
<td></td>
</tr>
<tr>
<td>Care teams hit 20 percent of market</td>
<td></td>
</tr>
<tr>
<td>Quantified self hits 20 percent of consumers</td>
<td></td>
</tr>
<tr>
<td>Exchanges hit 20 percent of plans bought</td>
<td></td>
</tr>
<tr>
<td>Genomics goes mainstream</td>
<td></td>
</tr>
</tbody>
</table>
**A changing market**

<table>
<thead>
<tr>
<th>Volume</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>One value chain</td>
<td>Three</td>
</tr>
<tr>
<td>Patient</td>
<td>Consumer</td>
</tr>
<tr>
<td>Repair</td>
<td>Prevention</td>
</tr>
<tr>
<td>FFS</td>
<td>Fixed payment</td>
</tr>
<tr>
<td>Compete</td>
<td>Collaborate</td>
</tr>
</tbody>
</table>
What can we do?

• Cost position
• Care teams
• Contracting/business design
• Collaboration energy
• Who will lead?

– Productivity breakthrough
– Who will own prevention?
– The sound of one hand clapping
– In every industry
Who will own prevention?

Care Teams

- Insurer
- Pharmacy chain
- Hospital system
- Independent ACO/PCMH
What can we do?

• Cost position  – Productivity breakthrough
• Care teams  – Who will own prevention?
• Contracting/business design  – The sound of one hand clapping
• Collaboration energy  – In every industry
• Who will lead?
Strong business models exploit change; weak business models lose value faster.

E.g. taking advantage of retail, mobile, telehealth, Watson, genomics