

# Vinyl: 2020 Ten Years Later

An Overview of Progress, Challenges and Opportunities

---

Irving Leveson

[ForecastCenter.com](http://ForecastCenter.com)

World Vinyl Forum III  
September 27, 2007

# Outline of Discussion

---

- Previous Reports and Recent Developments
- The Business Environment: A Look Ahead
- Vinyl Trends, Prospects and Challenges
- Conclusion

# Previous Reports and Recent Developments

---

# Vinyl 2020 Report I (April 1996)

- **Economic conclusion** (Leveson): The world economy was at the early stages of a long-term acceleration in growth from an exciting wave of technological change, along with the unleashing of powerful market forces.
  - In contrast to the earlier emphasis on Asian newly industrializing countries, the spread of development was being spearheaded by high growth in the largest nations and in formerly socialist countries
  - Trade would continue to grow significantly faster than GDP and energy prices would remain volatile
- The “continuation” scenario of industry growth was considered far more likely than acceleration, maturation or restriction
- **Environmental conclusion** (Gary Gappert): “The traditional right-wing/left-wing dichotomy on issues is evolving into a new polarization between growth and green political perspectives...”
- **Technological conclusion** (Joseph F. Coates): “Only the total sunseting of vinyl would inhibit the continuation of existing trends in growth.... Efforts to replace vinyl or selectively sunset some vinyl products would impede the acceleration to new levels of use.”

# Vinyl 2020 Report II

(Leveson, October 2002)

- “Underlying strengths during 1995-2002 have been contorted by crises and boom-bust that added volatility and reduced the average growth rate for the period. However, those strengths will continue; the stage is being set for higher growth in the years ahead.”
- “The big story in world development continues to be the transformation of large developing countries and countries that are in transition from communism and socialism.”
- “Economic growth will be greatest in the Third World where...the installed base of PVC is not large.”
- “As countries grow, the ones with the larger internal markets eventually will become more self-sufficient in vinyl production. This is especially true of China.”
- “If a warming trend continued it would be likely to increase public pressure for action [on climate change].”

# Developments since October 2002

---

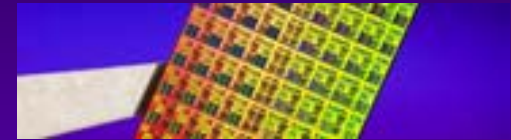
- Upswing in the U.S. business cycle
- Strong Asian growth and world growth more broadly
- Rise in energy and other commodity prices
- Global M&A wave
- Financial excesses
- International conflicts and tensions
- U.S political shifts

# The Business Environment: A Look Ahead

---

# Technology

- The U.S. and world are in a period of accelerated technological change that will continue for many years and underpin the continuation of accelerated economic growth
- In the vinyl industry, technology continues to be evolutionary rather than revolutionary



Intel 80-core teraflops  
research chip



# A More Volatile Economy

Prospects during the next five years include:

- Fallout from financial excesses on a global scale
- Asian led boom moderates, with serious impacts on emerging economies
- U.S. advances without the added kick from cyclical recovery and can't avoid a recession forever

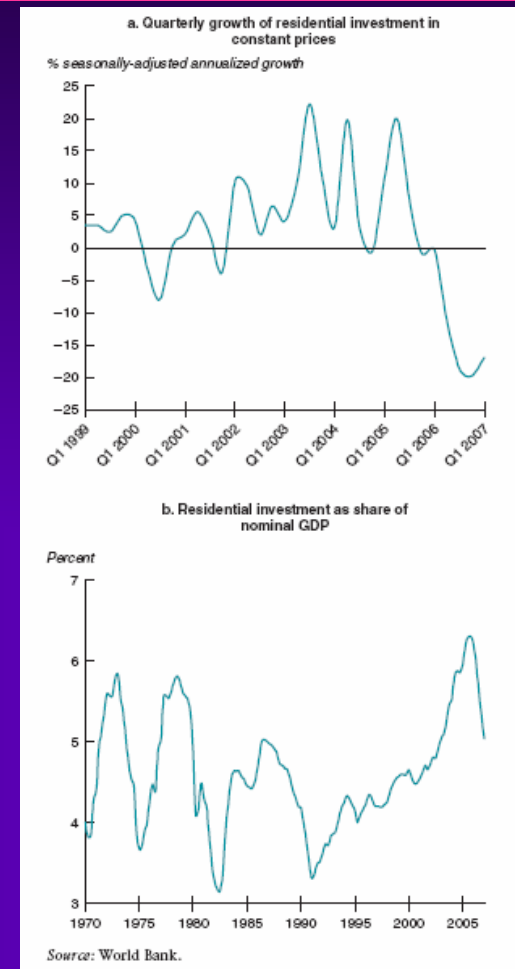
Over the full period through 2020, expect:

- A more moderate trend of U.S. and global growth
- U.S. fiscal and retirement imbalances and low personal saving take their toll
- A new long global wave of inflation, initiated by commodities and energy but broadening, is a growing possibility, with a potential delay in its start by global slowdown



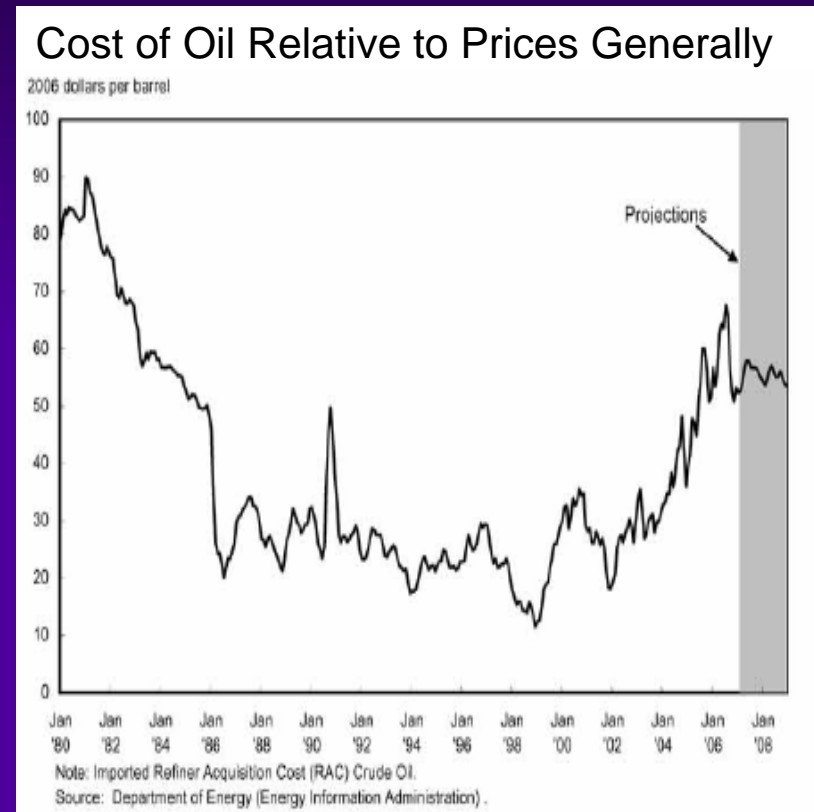
# U.S. Housing: How Long, How Deep?

- Past experience tells us things will get worse and they might stay bad for some time
  - We may not see the worst of low demand until we're in a recession
- Retirement housing will boom
  - But who will late boomers sell to?



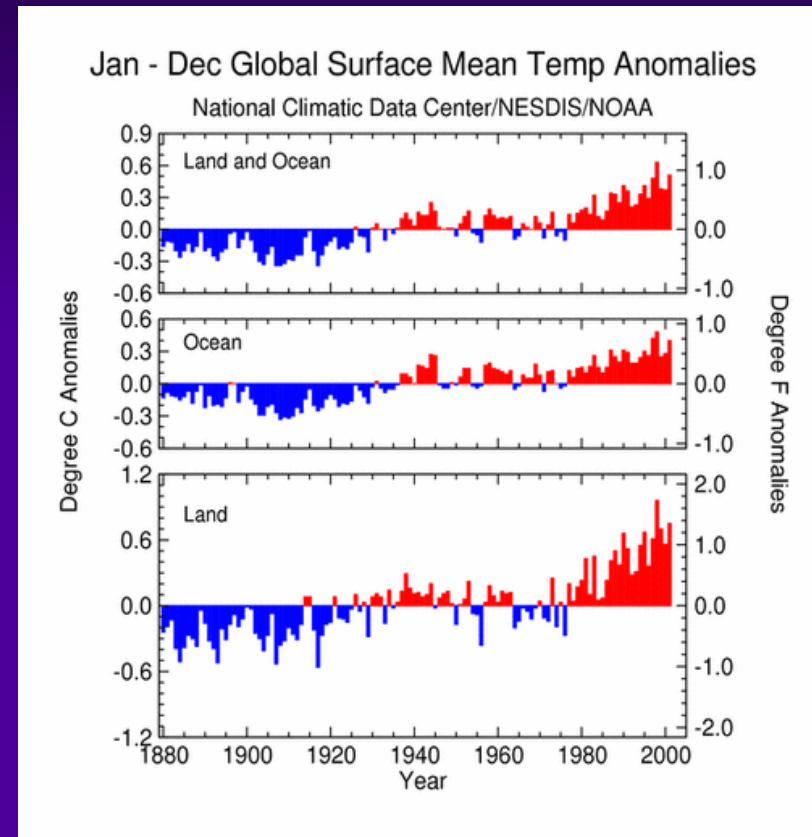
# Energy

- Oil prices hurt the economy, but not as much as in the 1970s and 1980s
  - Prices are not as high as at their peak in relation to inflation
  - Less energy is used per unit of GDP
- The dominant trend is the shift from oil to gas, not from fossil fuels to other energy sources
- Diversification of supplies makes economic sense rather than energy independence
  - Facilitating markets



# Climate Change and the Environment

- Climate change has gained increasing attention but is still a low priority in the U.S.
  - The public has been unwilling to make large sacrifices
  - Adaptation, which requires long lead times to modify infrastructure, has been off to a slow start
  - There is strong interest in environmental issues that have or threaten a more immediate impact
  - The new Congress and President will do more
- In Europe the environment is often a moral issue
- Asian countries will act where the environment threatens to choke off development or create political unrest



# Water and Infrastructure

## Water

- Only 1%-2% of the earth's water is fresh water
- Population and economic growth are raising demand for access
- Droughts in Southwestern U.S. and Australia illustrate larger concerns
- International tensions over water limit its development
- Solutions will be fostered by a general infrastructure boom
- Water wars

## Infrastructure

- Has been booming with the growth of Asia and restructuring economies and with higher energy prices
- Interest increased in the U.S. after the hurricanes in New Orleans and the 2007 collapse of the Minneapolis bridge
- Spending on infrastructure
  - Likely to rise but be limited by budget stringency at the federal level and in some states
  - Could rise with Democratic Party control because of its importance to unions and cities

# U.S. Politics and Role of Government

- Changing of the guard
- Regulation and taxation
  - Energy
  - Environment
  - Financial markets
- Income inequality
  - Unions
  - Minimum wage
  - Executive compensation
- Budget shifts
  - Social Spending
  - Infrastructure
  - Limits on spending?
  - Peace dividend?



# China

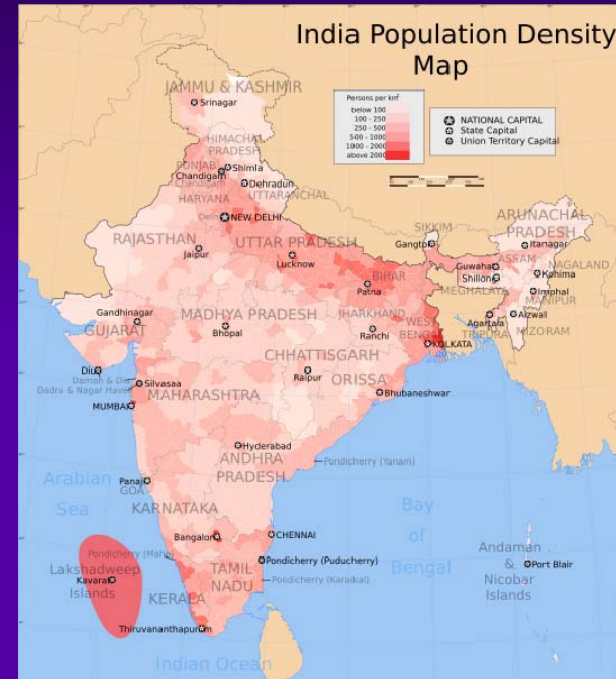
- China exports \$1,000 per year for every man, woman and child
- Issues:
  - Growth of domestic consumption
  - Substitution of domestic production for imports will be followed by expansion of exports
  - Demand for energy and other commodities
  - Overcapacity and cyclicity
  - Currency valuation and trade friction



PVC demand in China was 8.2 million metric tons in 2005, up from 1.9 million in 1995, and is growing at 8% per year, according to the Fredonia Group.

# India

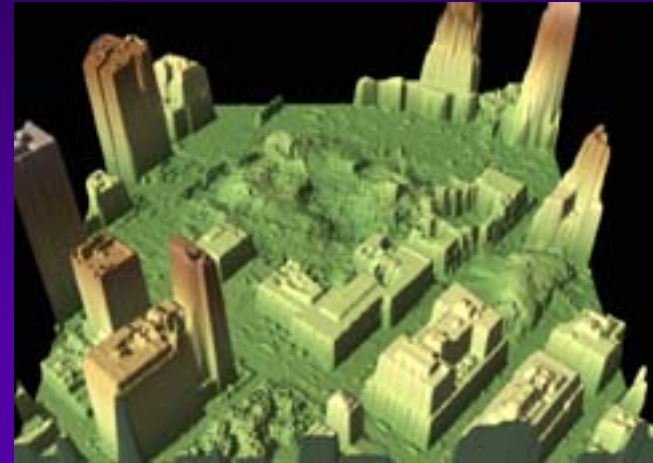
- Bottlenecks, population pressures and old ways create inflationary pressures
- Efforts to curb inflation, as well as structural problems, constrain economic growth
- Nevertheless, the outlook is promising
  - Progress has firmly taken hold
  - Improvements in infrastructure are taking place
  - Inefficiencies leave room for rapid gains
  - Most importantly, the nation increasingly is willing to let markets work





# Wars, Terrorism and Security

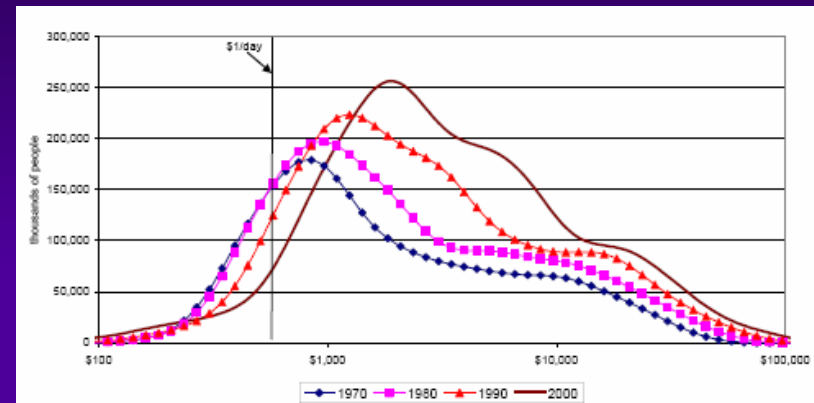
- A difficult environment will continue
- Effects through energy prices
  - Energy supply vulnerability will be an even greater issue as a result of political and military risks
- Risks to doing business



# Sustainability and World Poverty

- Three types of sustainability
  - Economic
  - Social (after disasters, wars)
  - Environmental
- World income distribution
  - Rapidly moving up, sharply reducing poverty
  - Inequality largely remains constant
- Environmental issues
  - Resource sustainability
  - Damage to the environment
  - Climate change

World Distribution of Income, 1970-2000

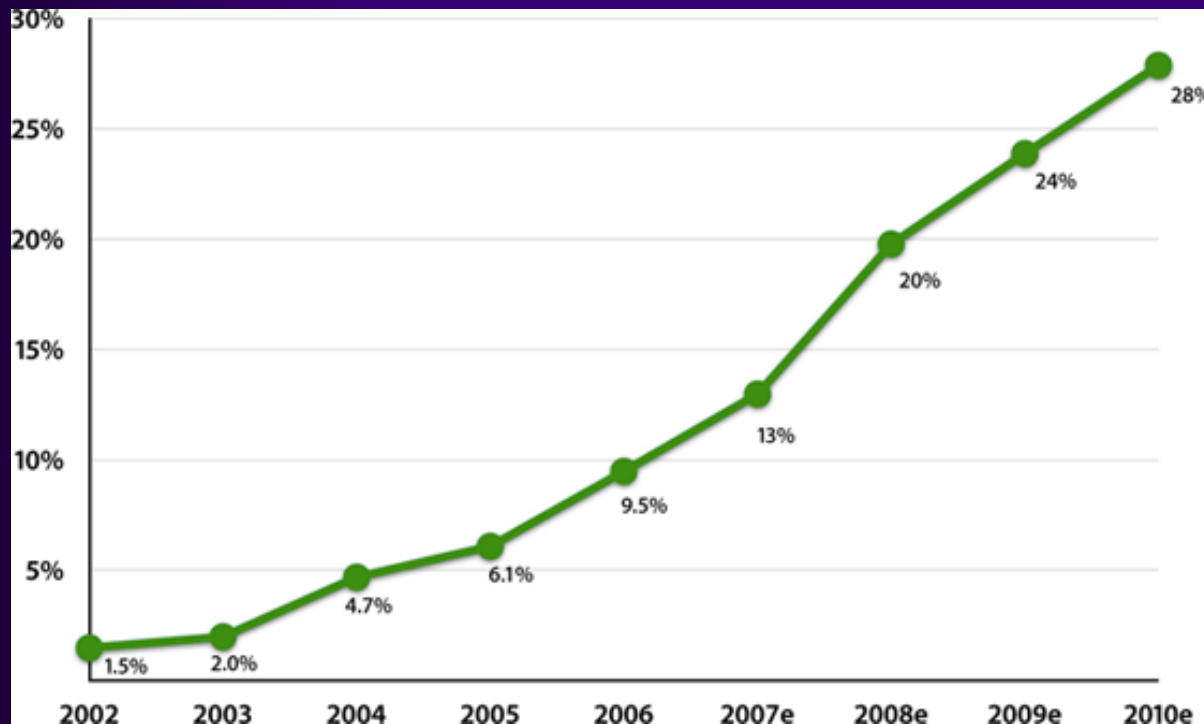


The economy and the environment interact both *positively* and negatively and can form a virtuous circle.

Emphasis tends to be placed on resource scarcity and adverse environmental outcomes. However, rising incomes create demand for a better environment and provide resources to achieve improvements. Associated technological changes can improve the environment and economize on resources. Environmental improvements enable further economic growth.

# Corporate Social Responsibility Is Turning Into a Stampede

Apple's Recycling (percentage by weight)



# Vinyl Trends, Prospects and Challenges

---

# U.S. Vinyl Trends

- Vinyl everywhere
- Housing vulnerability
- Increased international competition

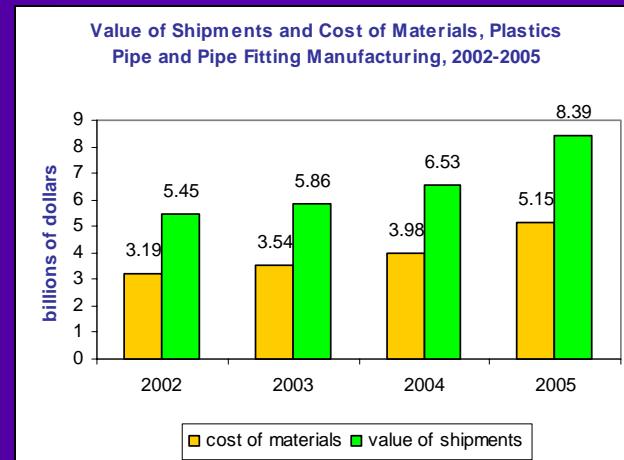
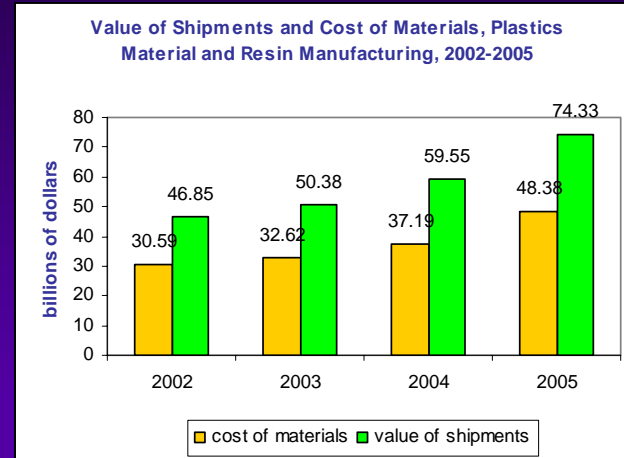


U.S. PVC demand increased rapidly through 2005. Pricing kept pace with rising costs.

Demand slipped in 2006 as a result of the downturn in the housing cycle. These pressures continue in 2007 and will extend further.

U.S. production was 14.9 million pounds in 2006, down 2.2% from 15.3 million in 2005 despite recovery from the Gulf hurricanes of 2005. Total sales and captive use was 14.9 million pounds, 3.1% lower than the 2005 level of 15.4 million. PVC exports were down 3.1% for the year.

Source: American Chemistry Council



Source: U.S. Census Bureau

# Long Term Economic Scenarios

- Unusual continuity in U.S. and world growth, led by Asia
  - Continuation of world growth at more moderate levels
  - Asian and/or U.S. cyclical reversal



# Outlook for the Vinyl Industry

## Challenges

- Most of the growth and competition is from the developing countries
- A more difficult economic environment in the U.S. and the world
- High and volatile energy prices
- End of the U.S. housing boom
- Increased regulation in the U.S.
- Challenges of new venues of communication

## Opportunities

- A continuing high level of world economic growth
  - Concentrated in areas with large infrastructure needs and without a large installed base
  - Growth of consumer markets
    - Vinyl demand and trade rise faster than GDP
- Rising costs of competing materials
- Technological advances providing new solutions and markets
- Potential use of vinyl for energy savings

# Communications in a Web-Based and Mobile World

- You cannot expect to generate positive chatter about vinyl
- Forceful attempts to gain visibility are more likely to make you a target
- You can try to answer misinformation in blogs and chat rooms
  - This must be selectively targeted and done quickly and authoritatively

“You’ve got to be quite careful about saying this is an ecologically sound product unless you can really sustain that.”

Miles Flint

President, Sony Erikson, May 2007

*“I’d be the last person to say that I never roll my eyes at the next start-up that’s doing online Wiki-based, popularity-ranked, video-podcast, mobile, social, dating, widgets for the dog and cat owner market.”*

Marc Andreesson, inventor of the first commercial Web browser and creator of Netscape, in launching his own blog this year



# Conclusion

---

Booms and busts will pass and competition will increase, but the long term global growth story remains intact

Challenges will be greater than in the past

However, the business and social environment remains a manageable challenge for an industry that has become and will remain part of our way of life

# Thank you

---

**Irving Leveson**

**ForecastCenter.com**

**10 Inverness Lane**

**Jackson, NJ 08527-4047**

**732-833-0380**

**cell 609-462-3112**

**fax 732-833-9986**

**[ileveson@optonline.net](mailto:ileveson@optonline.net)**