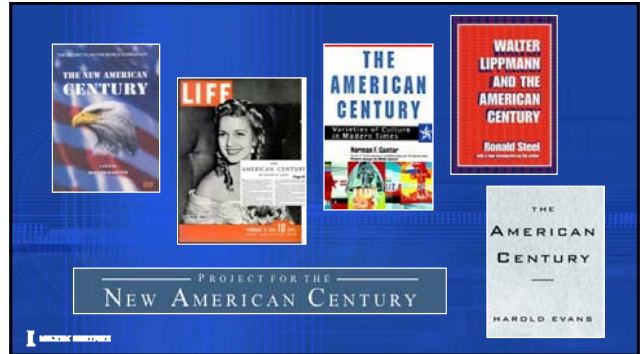


The Promise of the 21st Century

San Diego Regional Economic Development Corporation
San Diego
June 2, 2011

Michael Milken
Chairman, The Milken Institute



“No event since Pearl Harbor set off such repercussions in public life. There was a sudden crisis of confidence that created a perception of American weakness. Many people were scared half to death and had panic reactions.”

MILKEN INSTITUTE

9/11?



MILKEN INSTITUTE



The New York Times.
SOVIET FIRES EARTH SATELLITE INTO SPACE;
IT IS CIRCLING THE GLOBE AT 18,000 M. P. H.;
SPHERE TRACKED IN 4 CROSSINGS OVER U.S.

MILKEN INSTITUTE

President Kennedy Challenges the U.S.

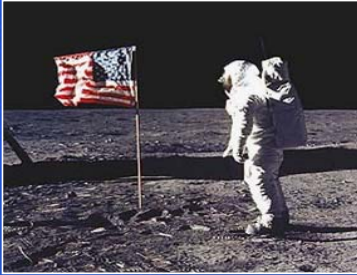
“We choose to go to the moon in this decade ... not because [it is] easy, but because [it is] hard ... because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win.”



September 12, 1962

MILKEN INSTITUTE

1969: "The Eagle has landed."



MILKMAN INVESTMENTS

The Promise of the 21st Century

- The Promise
- What Role will the U.S. Play?

MILKMAN INVESTMENTS

What is "the promise"?

- Access to financial capital
- Human capital
- Deployment of technology
- Personalized medicine

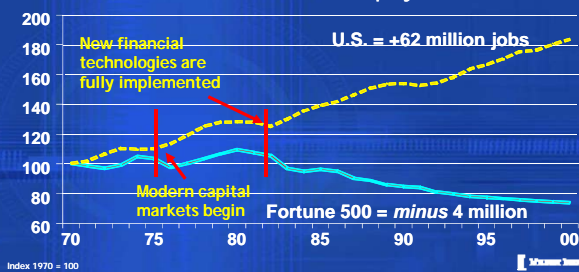
MILKMAN INVESTMENTS

$$P = \sum Ft_i * (\sum HC_i + \sum SC_i + \sum RA_i)$$

- P = Prosperity
- Ft = Financial Technology
- HC = Human Capital
- SC = Social Capital
- RA = Real Assets

MILKMAN INVESTMENTS

America Goes to Work U.S. and Fortune 500 Employment



Index 1970 = 100

MILKMAN INVESTMENTS



Vistage International

- Nearly 15,000 members in 15 countries (now including China)
 - 2,500 in California
 - 400 in San Diego
- Members' revenues top \$300B
- Represent more than 2 million employees

MILKMAN INVESTMENTS

The Nature of Credit

1. Credit is what counts, not leverage.
2. Most loans to real estate are not investment-grade.
3. Interest rates are volatile and unpredictable.
4. Credit research is more than ratings.
5. Sovereign debt is historically risky.
6. Debt values underpin all capital markets.

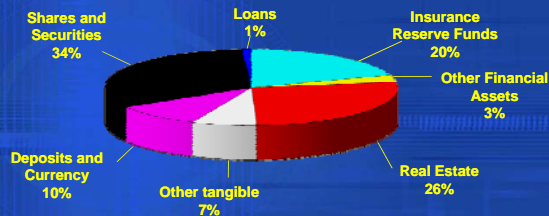
MILKEN INSTITUTE

What is "the promise"?

- Access to financial capital
- Human capital
- Deployment of technology
- Personalized medicine

MILKEN INSTITUTE

2010 U.S. Household Balance Sheet \$71 Trillion Total



Source: Federal Reserve, Flow of Funds, Q4 2010

MILKEN INSTITUTE



Gary Becker

1992 Nobel Prize in Economics
(at the Milken Institute Global Conference)

MILKEN INSTITUTE

*The 21st Century will see
a worldwide competition
for human capital.*

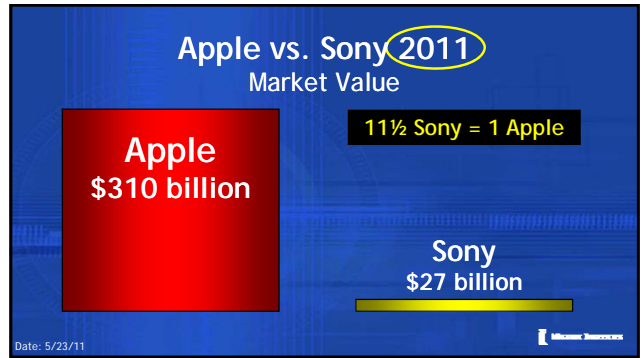
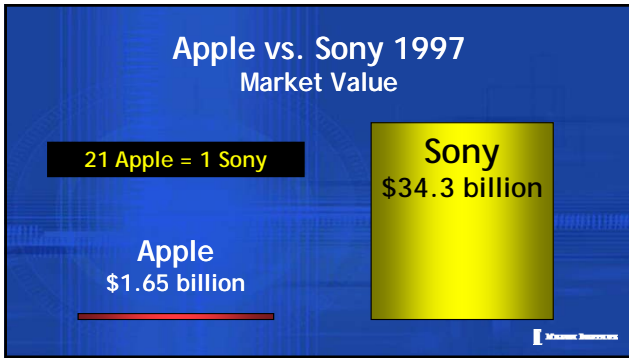
MILKEN INSTITUTE

"Innovation has nothing to do with how many R&D dollars you have. When Apple came up with the Mac, IBM was spending at least 100 times more on R&D. It's about the people you have [and] how you're led."



-Steve Jobs

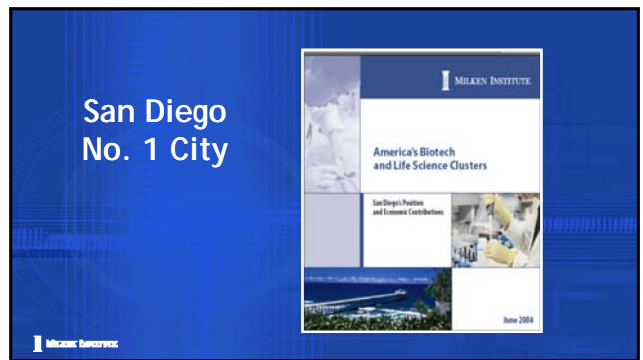
MILKEN INSTITUTE



Do human capital strategies work?

	Per Capita GDP	
	1960	2010
Singapore	\$2,271	\$43,117
Jamaica	\$2,255	\$5,039

Source: IFS, WEO, IMF. In 2010 USD



- ### Milken Institute Biotech Index Top Performing Metropolitan Areas
- San Diego
 - Boston
 - Raleigh-Durham
 - San Jose
 - Seattle
 - Washington, D.C.
 - Philadelphia
 - San Francisco
 - Oakland
 - Los Angeles
 - Orange County
 - Austin



What is "the promise"?

- Access to financial capital
- Human capital
- **Deployment of technology**
- Personalized medicine

McGraw Hill Education

IBM System 370/168 in 1976

- **8 megabytes for \$8 million**
- **Cost per megabyte: \$1 million**



McGraw Hill Education

Apple iPod Classic - 2010

- **160 gigabytes for \$249**
- **Cost per megabyte: <\$0.0016**



McGraw Hill Education

The iPod has 20,000 times the storage capacity of IBM's largest computer in 1976.



The cost-per-megabyte of the IBM is 641 million times the iPod.



McGraw Hill Education

Cost of a 1-Minute Phone Call from the U.S. to India

1975
\$10

2011
\$.01



Telecommunications cost to business approaches zero.

McGraw Hill Education

There are more than 5 billion cell phones in the world.



McGraw Hill Education

Access ... Anywhere ... Anytime



Source: McGraw Hill advertisement

McGraw Hill

Blockbuster vs. Netflix - 2002 Market Value

40 Netflix = 1 Blockbuster

Blockbuster
\$4.5 billion

Netflix
\$0.16 billion



McGraw Hill

Blockbuster vs. Netflix 2011 Market Value

Netflix
\$13.8 billion

Infinite Blockbusters = 1 Netflix

Blockbuster
\$0

Source: WSJ.com - 5/26/11

McGraw Hill

What is "the promise"?

- Access to financial capital
- Human capital
- Deployment of technology
- Personalized medicine

McGraw Hill

Half of all economic growth in the last two centuries can be traced to medical research advances.

McGraw Hill

Top Causes of Death

1907

1. Pneumonia/flu
2. Tuberculosis
3. Heart disease
4. Diarrhea
5. Stroke

2010

1. Heart disease
2. Cancer
3. Stroke
4. Respiratory disease
5. Accidents

Since 1900, childhood death rates from pneumonia and influenza have fallen 93 percent.

Source: AARP Bulletin / June 2007

McGraw Hill

Revolution Occurring in Medicine

Reactive → Predictive → Preventive

MIT Learning Technology

There are millions of data points in a single drop of blood ...



MIT Learning Technology

Estimated Cost of Sequencing a Gene

- 1974 \$150,000,000
 - 1998 \$150
 - 2008 \$1.00
 - 2011 \$0.04
 - 2014 \$0.004
- (That's faster than Moore's Law.)

Source: Monsanto; Dr. Leroy Hood, Institute for Systems Biology; MIT Technology Review

MIT Learning Technology

Your car gets a regular diagnostic analysis ...



Your teeth get a regular diagnostic analysis ...



MIT Learning Technology

One day soon your entire body will get a thorough diagnostic.



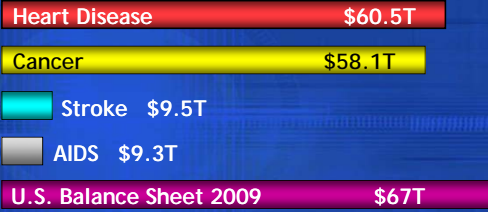
MIT Learning Technology

Goal:

Individualized preventive care and treatment for disease

MIT Learning Technology

Economic Value of Eliminating Deaths



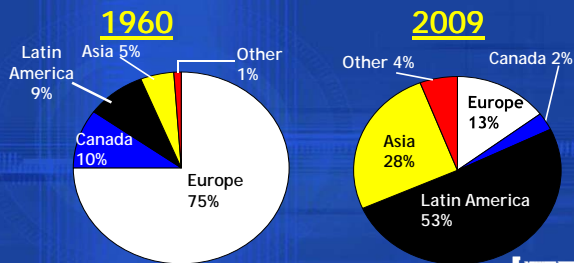
Source: Estimates base on 1999 studies by Kevin Murphy and Robert Topel/University of Chicago

The Promise of the 21st Century

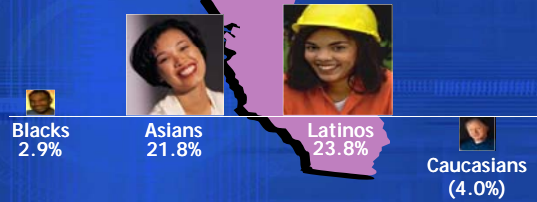
- The Promise

- What Role will the U.S. Play?

Where U.S. Immigrants Were Born



California's Changing Faces Population Growth (2000 - 2009)



Source: U.S. Census Bureau

Top Ten Home-Buyer Surnames California

- | 1990 | 2010 |
|-------------|--------------|
| 1. Smith | 1. Nguyen |
| 2. Lee | 2. Lee |
| 3. Johnson | 3. Garcia |
| 4. Garcia | 4. Chen |
| 5. Brown | 5. Lopez |
| 6. Williams | 6. Rodriguez |
| 7. Miller | 7. Gonzalez |
| 8. Wong | 8. Hernandez |
| 9. Martinez | 9. Martinez |
| 10. Jones | 10. Kim |

Source: MDA DataQuick, county records / California Association of Realtors

At the same growth rates ... California's population in 2020



Source: U.S. Census



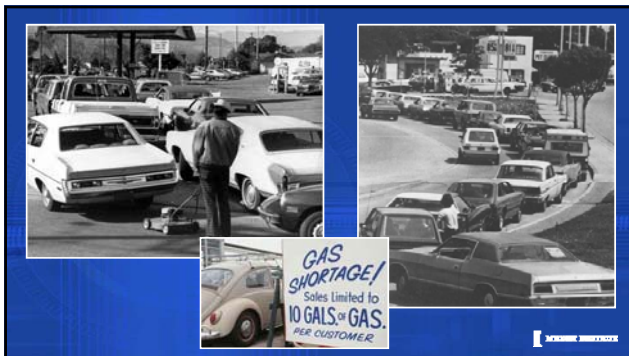
October 13, 2011
Los Angeles



Where's Sputnik?

- Energy
- Housing
- Entitlements
- Education
- Immigration
- Health

MILKEN INSTITUTE



President Jimmy Carter on the energy crisis and proposed energy legislation

"This difficult effort will be the 'moral equivalent of war' -- except that we will be uniting our efforts to build and not destroy."



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Percentage of Oil from Foreign Sources

Nixon	36.1%
Ford	37.1%
Carter	40.5%
Reagan	43.6%
Bush	47.2%
Clinton	49.8%
Bush	65.5%
Obama	66.2%

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Where's Sputnik?

- Energy
- **Housing**
- Entitlements
- Education
- Immigration
- Health

MILKEN INSTITUTE

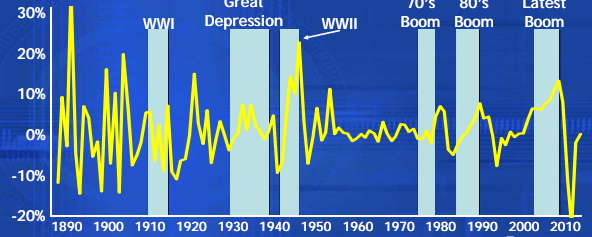
Fallacy:
 "Any loan to real estate is a good loan ... "



MILKEN INSTITUTE

Home prices don't go up forever

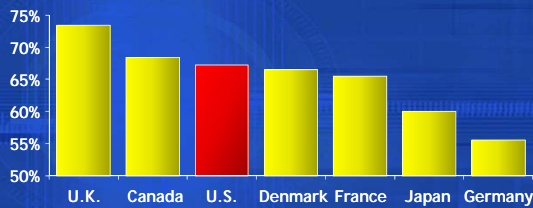
Change in home prices in 120 years



Sources: Robert Shiller, Milken Institute.

MILKEN INSTITUTE

Current Home Ownership Rates



Sources: EuroStat, HUD, Milken Institute.

MILKEN INSTITUTE

The American Dream Turns into A Nightmare

- Low down payments
- Tax preferences
- Extended payback terms
- Lack of pre-payment penalties
- Non-recourse terms that shield non-housing assets
- The myth that housing prices always rise

MILKEN INSTITUTE

Non-recourse and low-equity loans have not resulted in higher home ownership rates compared to other countries.

The cost to society has been far too high.

MILKEN INSTITUTE

Consumer Spending

<u>U.S.</u>		<u>Asia</u>	
Housing	32.7%	Food	23%
Transportation	18.0%	Education	15%
Food	12.8%	Housing	10%
Insurance/pensions	11.2%	Clothing	8%
Healthcare	5.7%	Other	8%
Entertainment	5.1%	Transportation	6%
Apparel and services	4.1%	Healthcare	5%
Education	2.0%	Communication	5%

Source: U.S. Bureau of Labor Statistics/CLSA

MILKEN INSTITUTE



Where's Sputnik?

- Energy
- Housing
- Entitlements
- Education
- Immigration
- Health

McGraw-Hill Construction

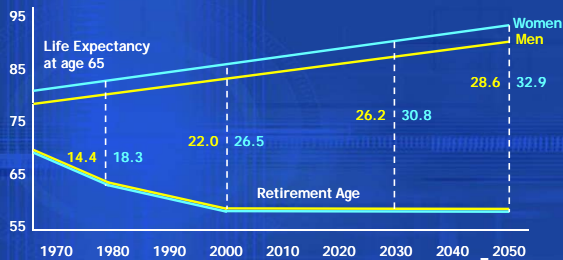
When Social Security was introduced in 1935, the average life span in the U.S. was 61.7 years.

In 2009, life expectancy in the U.S. reached 78.1 years.

Source: National Center for Health Statistics, *National Vital Statistics Reports*, vol. 54, no. 19, June 26, 2006.
U.S. Census Bureau, *International Database*.

McGraw-Hill Construction

Longer Life Expectancy; Longer Retirements France



Source: OECD Ageing and Employment Policies, France 2005

McGraw-Hill Construction

Entitlements - The Math Doesn't Add Up

- Unrealistic assumptions about rates of return on assets
- Falling ratios of current workers to retirees
- Workers who pay in to the system for too few years
- Pensioners who live longer than the original system planners assumed.

McGraw-Hill Construction



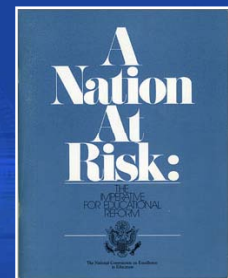
Where's Sputnik?

- Energy
- Housing
- Entitlements
- Education
- Immigration
- Health

McGraw-Hill Construction

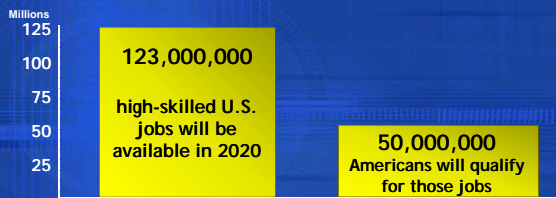
"If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might have viewed it as an act of war."

- 1983



McGraw-Hill Construction

The Jobs Problem (It Isn't Jobs - It's Trained Workers)



Source: Edward Gordon, "Winning the Global Talent Showdown"



China

- Parents spend an average of 15% on their children's education ... and only 10% on housing.
- 55% of parents in China send their children for extra lessons in English.



Consumer Spending

U.S.		Asia	
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Education	2.0%	Communication	5%



Source: U.S. Bureau of Labor Statistics/CLSA



More than 2,500 educators nationwide



- Multiple career paths
- Ongoing applied professional growth
- Instructionally focused accountability
- Performance-based compensation



- 273 Scholars since program began in 1989
- New York, Los Angeles, Washington, D.C.
- 79 born outside the United States
- 34 countries of origin
- 197 Scholars have one or more parents born outside the U.S.

Knowledge Universe

Knowledge Universe Singapore

Where's Sputnik?

- Energy
- Housing
- Entitlements
- Education
- **Immigration**
- Health

Highly skilled, entrepreneurial and educated immigrants are crucial to the United States' prosperity.

Building Human Capital Through Immigration

 Albert Einstein (Germany)	 Jerry Yang (Taiwan)	 Madeleine Albright (Czechoslovakia)
 Sergey Brin (Russia)	 Alex. Graham Bell (Scotland)	 Gustavo Dudamel (Venezuela)

INTEL SCIENCE TALENT SEARCH

The parents of two-thirds of the finalists at the Intel Science Talent Search were born in either China or India.

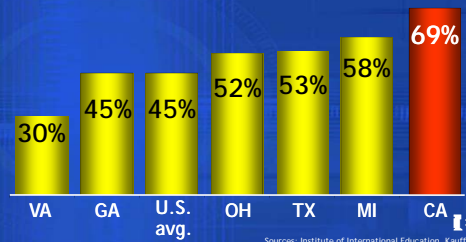
Doctorates Awarded in the U.S.

- **1/3** of all doctoral students in the U.S. are foreign born, up from one in ten 30 years ago.
- **84%** of their doctorates are in engineering and the sciences.

Sources: National Science Foundation/Div of Science Resource Statistics



Students Start Businesses Where They Attend College



Sources: Institute of International Education, Kauffman Foundation



Where's Sputnik?

- Energy
- Housing
- Entitlements
- Education
- Immigration
- **Health**

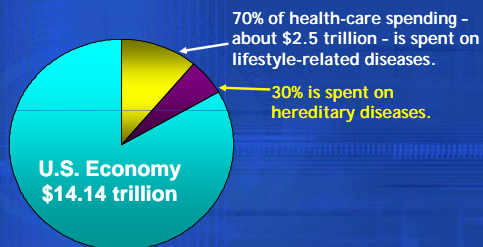


Three Solutions to Healthcare Challenges

- **Prevention**
- **Cost reduction**
- **Research leading to cures**

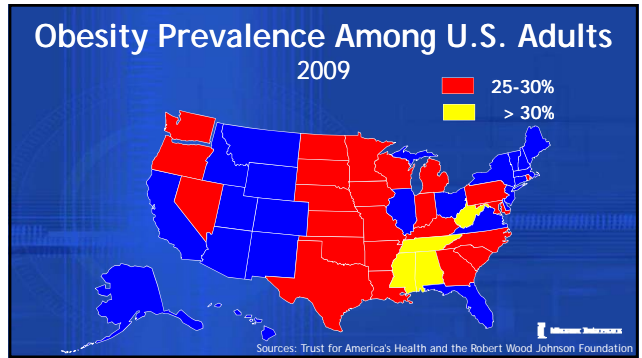
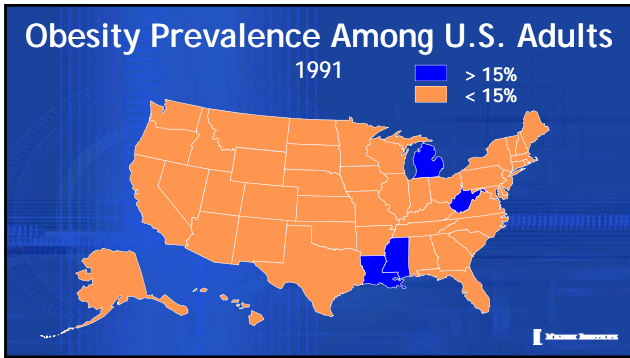


Lifestyle Makes a Difference



Sources: CIA Handbook / Centers for Medicare and Medicaid Services (2009)

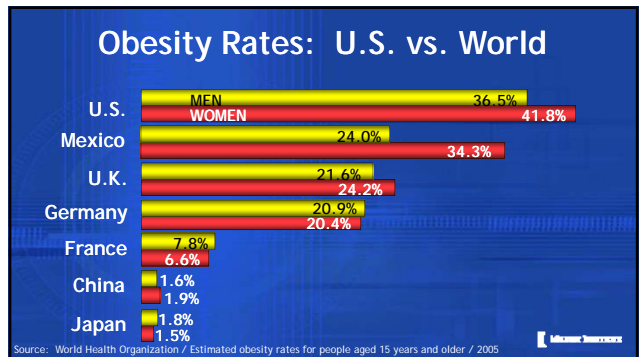




The U.S. Army Blues

Between 1995 and 2008, the proportion of U.S. Army recruits who failed their physicals because they were overweight rose nearly 70%.

Source: "Too Fat to Fight" - New York Times 8/30/10





Chronic Disease Study

Failure to address chronic diseases adequately costs the U.S. economy more than \$1 trillion annually.



Half of all economic growth in the last two centuries can be traced to medical research advances.



Company Value Comparison

U.S. \$ billions

	Enterprise Value	Est. P/E Ratio
Average: Consumer <small>(P&G, Estée Lauder, Coca Cola, Pepsi, Kraft)</small>	\$124.7	19.7
Average: Pharma <small>(Pfizer, J&J, Roche, Novartis, Merck, GSK, SanofiAventis, Abbott Labs, AstraZeneca, Amgen, BMS and Eli Lilly)</small>	106.1	14.0

Source: Bloomberg 5/25/2011



Do we have the will?

- Energy
- Housing
- Entitlements
- Education
- Immigration
- Health



“Never doubt that a small group of thoughtful, committed citizens can change the world: indeed, it’s the only thing that does.”

-Margaret Mead



The Promise of the 21st Century

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Chairman, The Milken Institute