

# Five Decades and Five Careers in System Dynamics

Presentation by  
Dennis Meadows

to the

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# Five Decades

- **Start** - In November 1963, I found an informational brochure on the MIT Industrial Dynamics PhD program while I was a senior chemistry major at Carleton College in Northfield, Minnesota.
- **End** - In December 2017, I expect to finish managing a center for advanced system dynamics communication and training in collaboration with the Bodenkultur University, in Vienna, Austria.

# Five Careers

- Teaching
- Writing
- Consulting
- Managing
- Investing

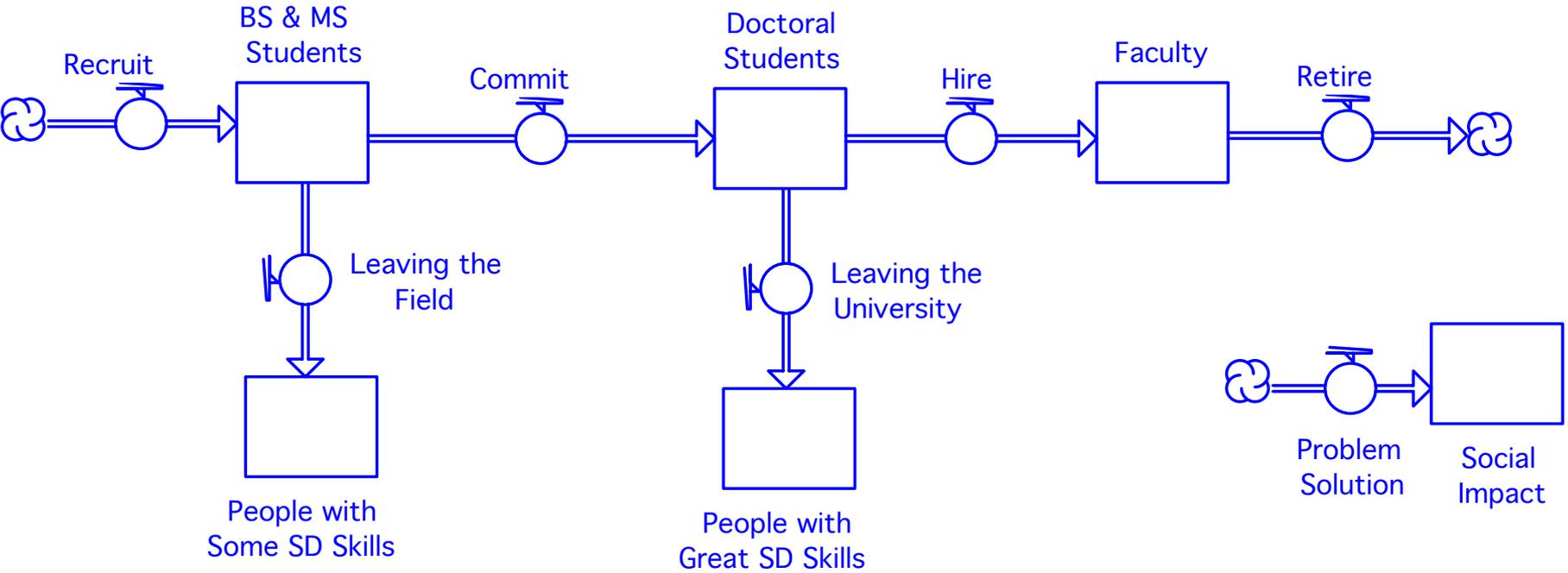
# Goals for the Presentation

- Expand your horizons about the field.
- Show several dilemmas for each career - using summary flow diagrams.
- Summarize a few key insights - using proverbs.
- Give you useful information for your own work.

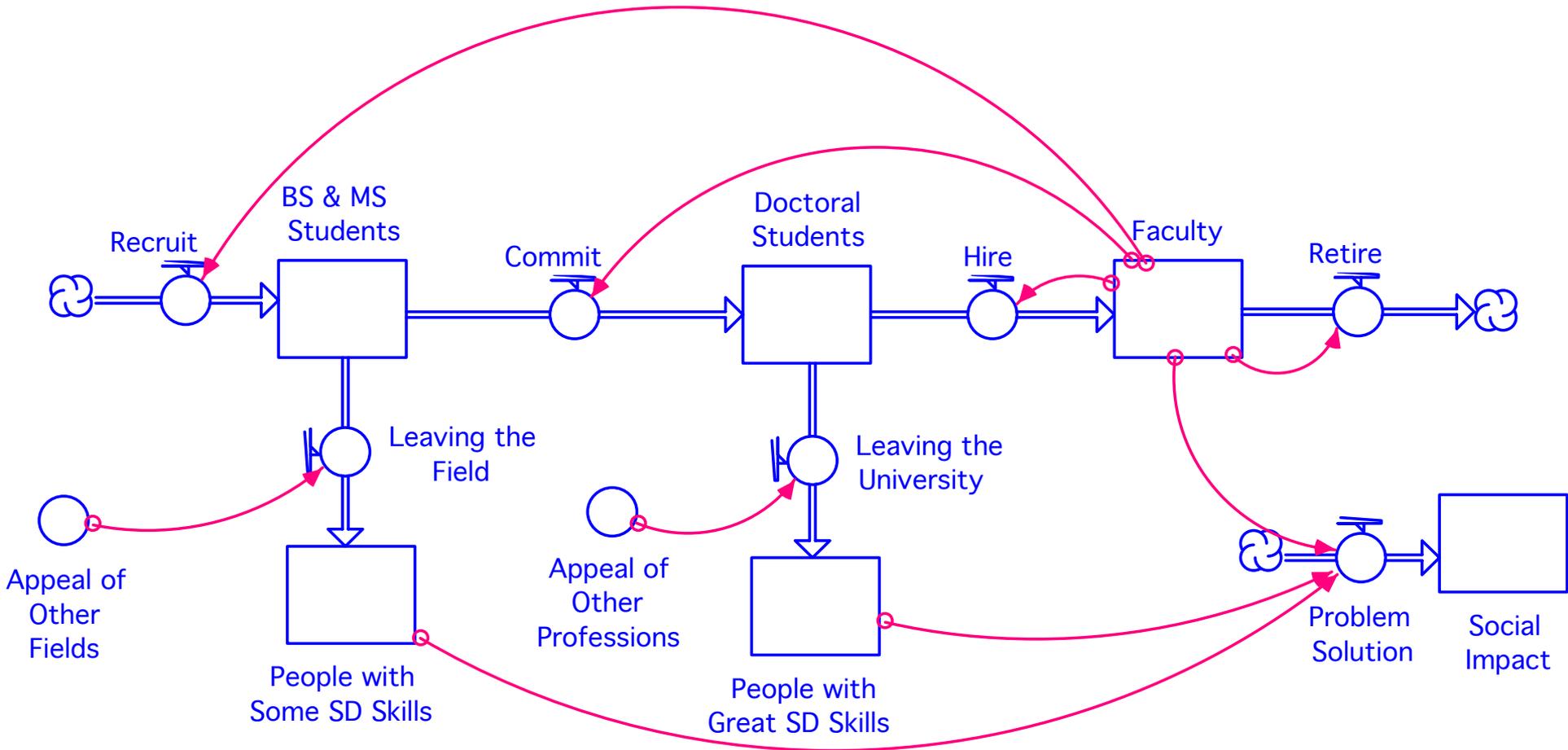
# Goals of Teaching

- Of course those in the profession have goals for their income, prestige, and freedom to pursue specific projects.
- The overall goal is to maximize social impact.

# Teaching



# Teaching



# Structural Problems in Teaching

- The policies we implement to make teaching more attractive to master system dynamicists may significantly reduce the flow of qualified professionals into the stock of SD faculty.

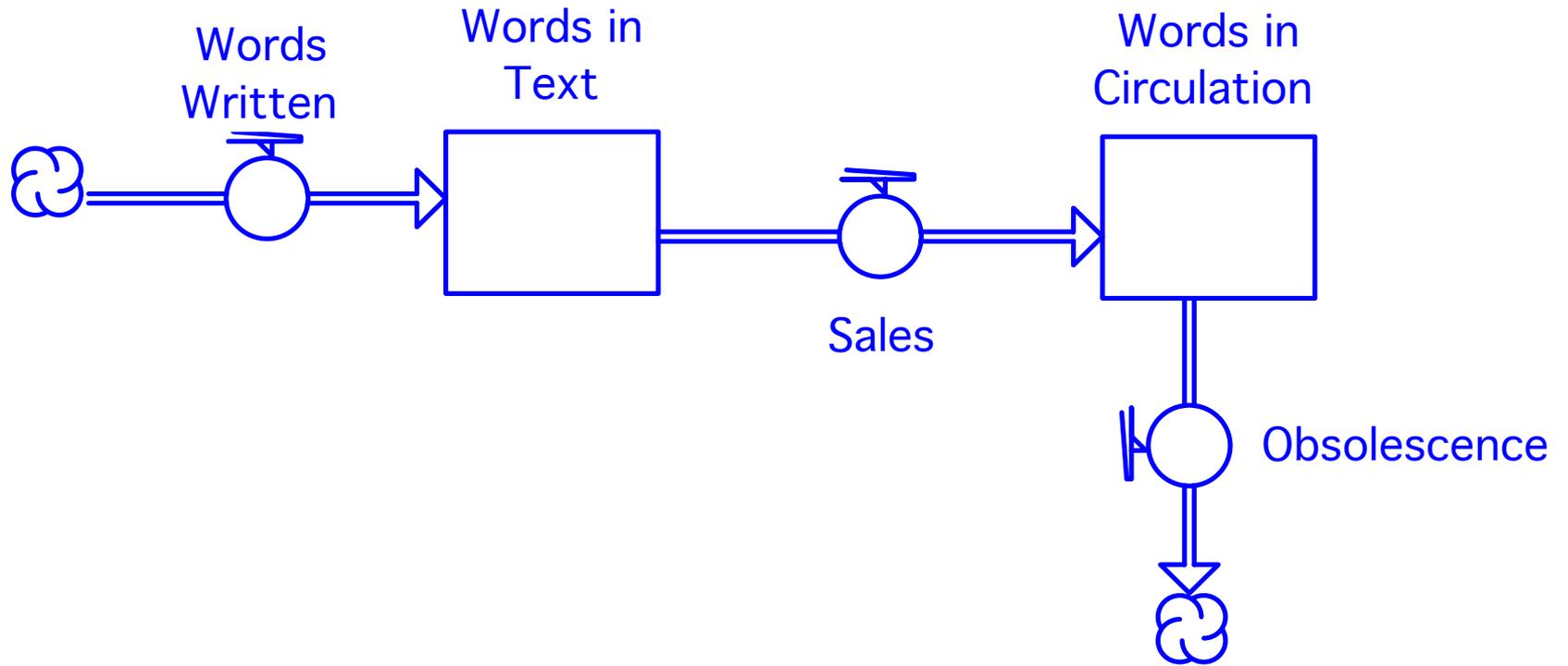
# Proverbs for Teaching

- Wisdom is one treasure you can give away and still keep have all the benefits for yourself.
- A person can know nothing of society without knowing something of themselves.
- Teachers open the door, but students must enter by themselves.
- Teaching others, teaches yourself.
- A person becomes learned by asking questions.
- A person who is wise and learned, but without virtue, will be despised.

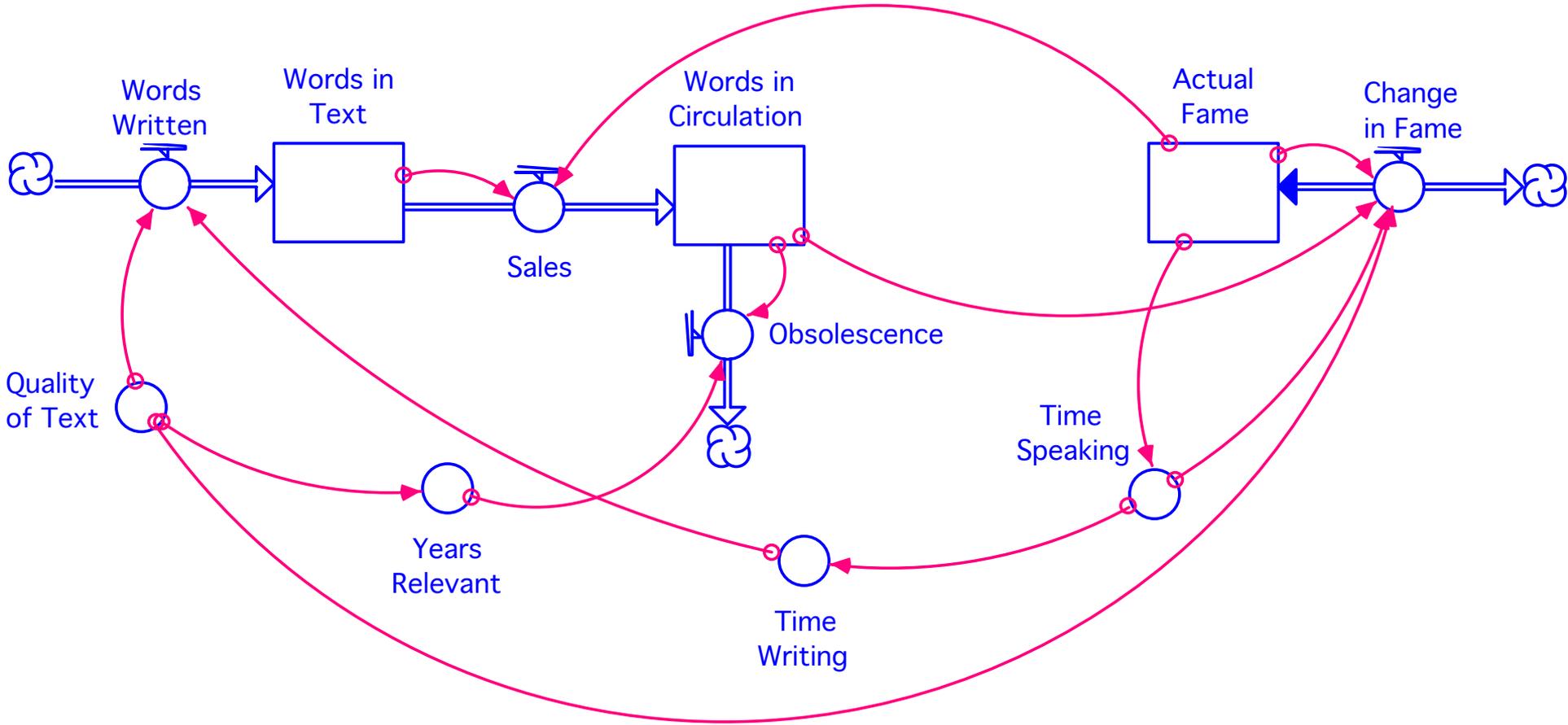
# Goals of Writing

- The field of SD encourages writing in order to increase the number of words that are in circulation.

# Writing



# Writing



# Structural Problems in Writing

- One may spend so much time speaking that there is no time left for writing.
- There is a very strong pressure to reduce the quality of what you write so that the number of words available to publishers is increased. This increases words in circulation over the short term, but reduces it in the longer term.

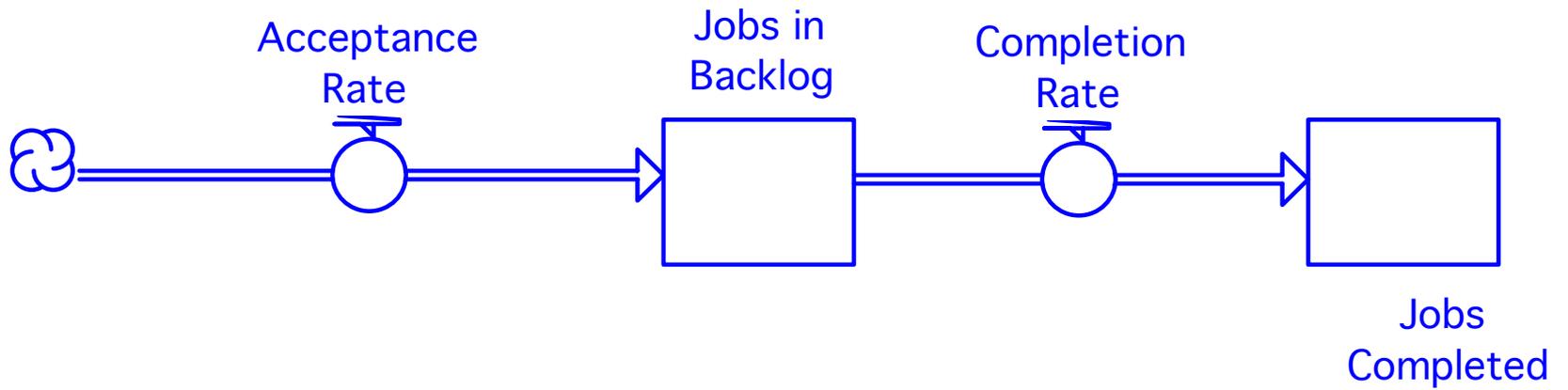
# Proverbs for Writing

- A flow of words is no proof of wisdom.
- Genius is an infinite capacity for taking pains.
- Better suffer for truth than prosper through falsehood.
- Books should speak true when counselors blanch.
- Whoever shall know the future must study the past.
- One picture is worth a thousand words.
- It is no use to have the book without the learning.

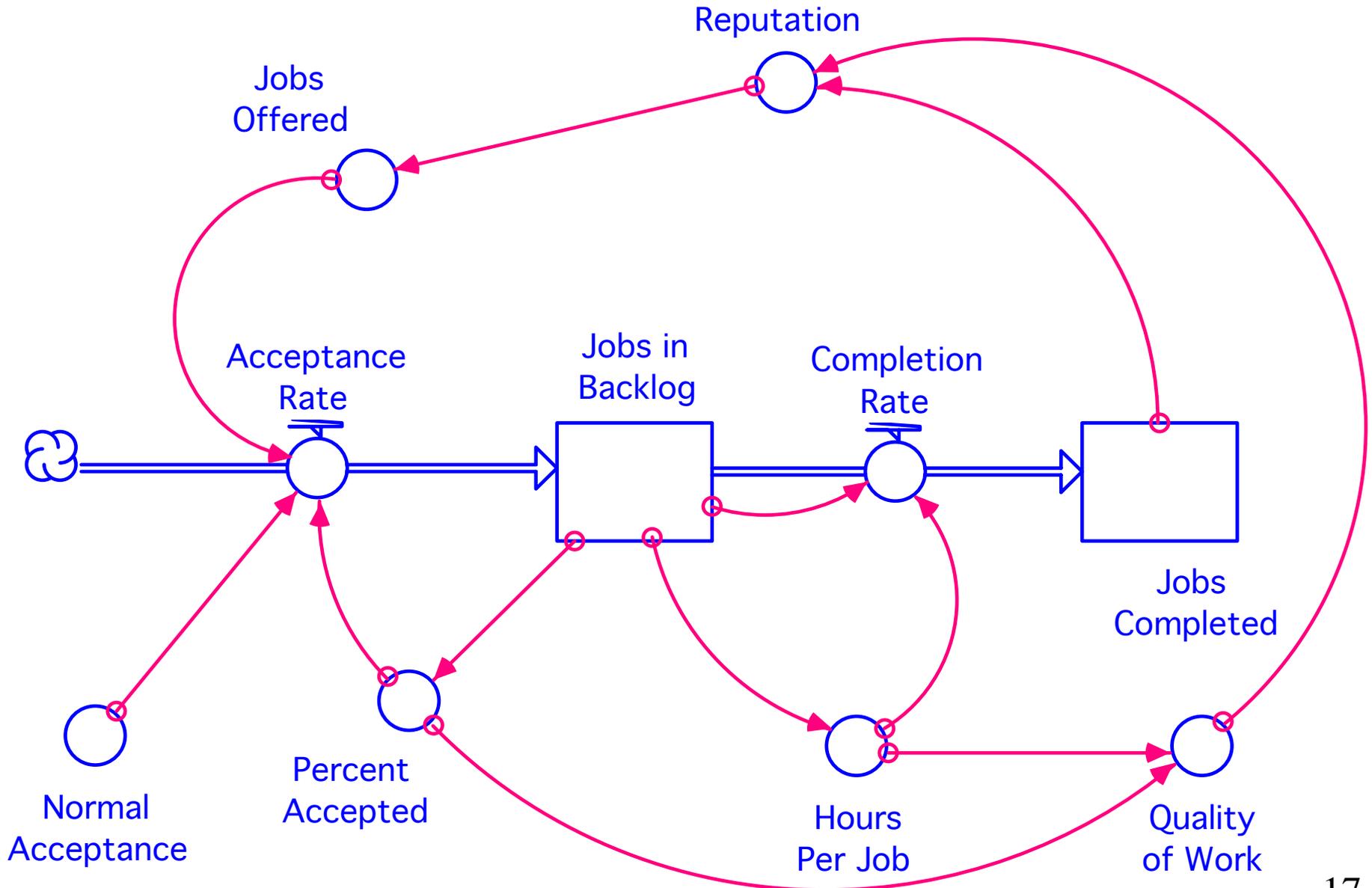
# Goals of Consulting

- Consultants are motivated to increase the number of jobs completed or to raise their reputation.

# Consulting



# Consulting



# Structural Problems in Consulting

- One may respond to the pressure by allocating all time to work; thereby reducing personal time and, eventually, productivity.
- One may set prices too low. That forces one to accept more jobs, which eventually leads to lower quality.

# Proverbs for Consulting

- Whatever has been attained is attainable.
- The horse may wish to do one thing; the rider who saddles him another.
- Argument seldom convinces anyone against their inclination.
- When your only tool is a hammer, everything looks like a nail.
- It is easy to be wise after the event.
- It is well for one to know more than one says.
- To know the disease is the commencement of the cure.
- It is not for the blind to give an opinion on colors.

# Proverbs for Consulting

- Most people die of their medicines, not their maladies.
- What good is running, if one is on the wrong road.
- It is not the same to talk of bulls as to be in the bullring.
- Excuses are always mixed with lies.
- It's a bad bridge that is shorter than its stream.
- Water which is distant is no good for a fire that is near.

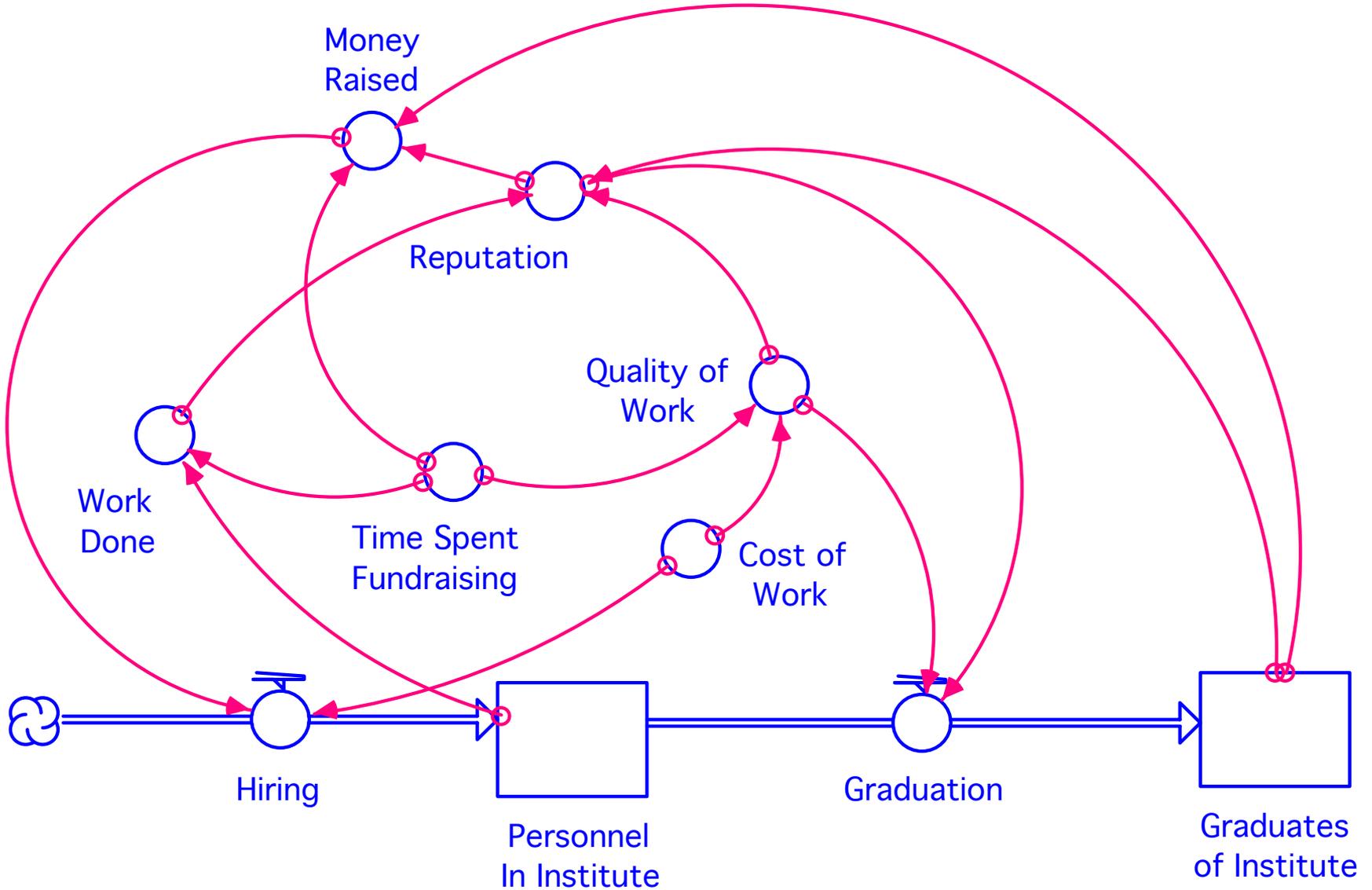
# Goals of Managing

- Managers are motivated to increase the number of people (the budget) they control. Peripherally they may try to increase their own reputation.

# Managing



# Managing



# Structural Problems in Managing

- Realize that the graduates of your program may be more important to you than the people you currently manage.
- Focus on reputation rather than the money raised.

# Proverbs for Managing

- He that is hated by his subjects cannot be a good king.
- If one cannot command oneself, it is a folly to try and command others.
- It is skill, not strength, that governs a ship.
- The word of a ruler ought to be as binding as the oath of a subject.
- One volunteer is worth two forced workers.
- Action must be founded on knowledge.
- There are two sides to every story.

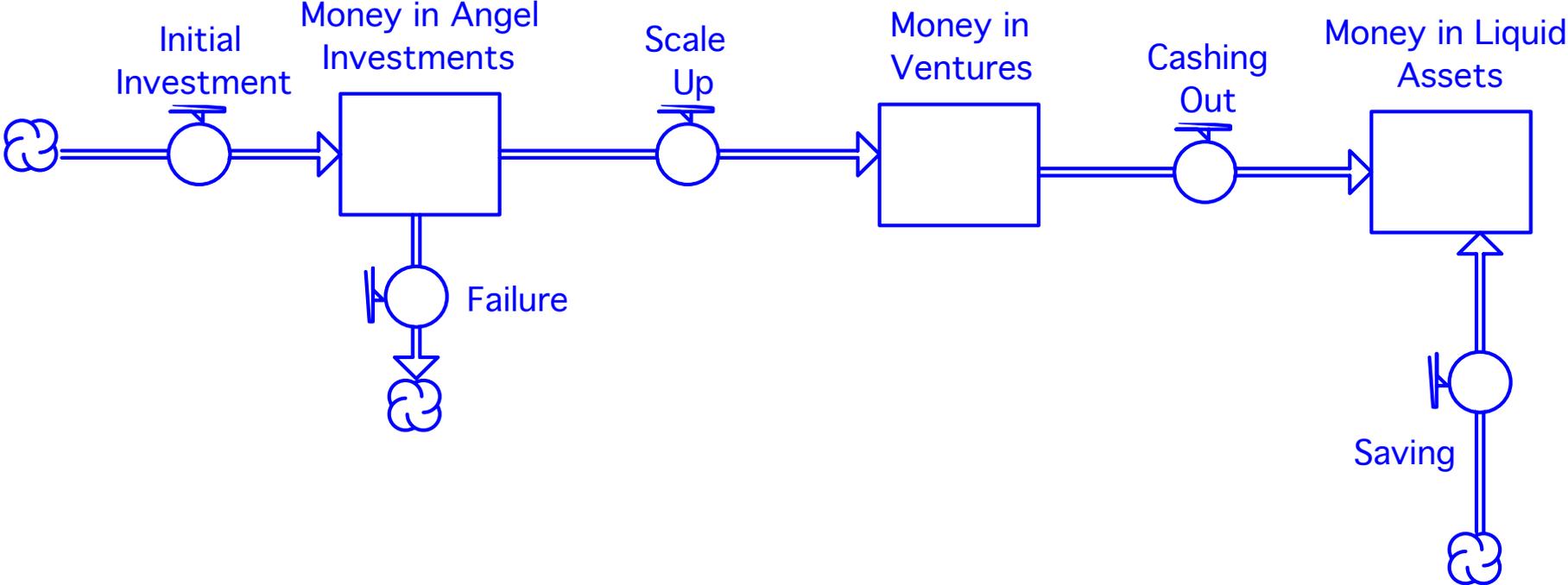
# Proverbs for Managing

- Spur not a willing horse.
- A good worker takes credit; a poor worker blames the tools.
- Every excuse contains a lie. Don't say 'yes' and mean 'maybe.'
- It is easy to forget a kindness, but hard to forget an unkindness.
- Condemn someone within their hearing, praise them when they are away.
- Spit not into the well, you may have to drink from it.
- Three persons helping one another will do as much as six persons singly.
- If one knows it, it is secret. If two know it, it is public. (Do not imagine two people can keep a secret)

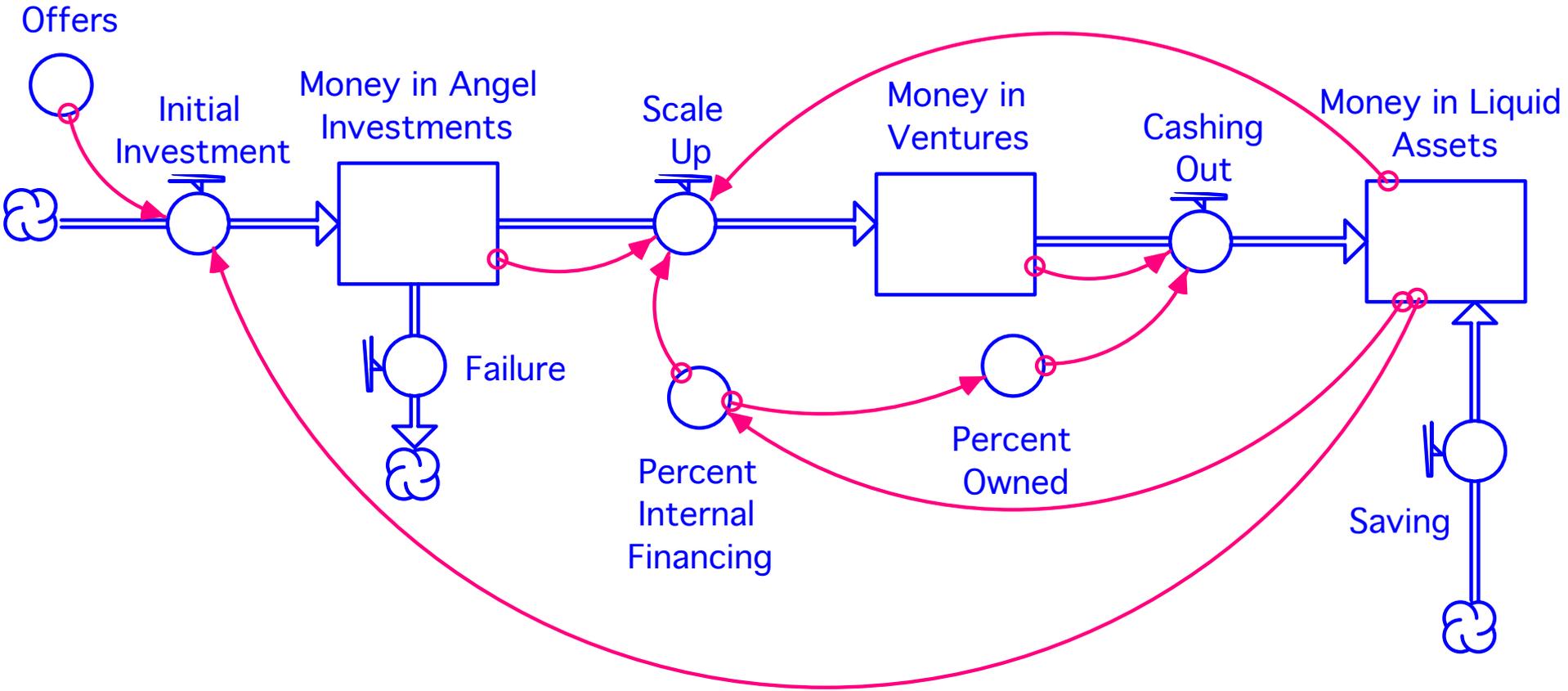
# Goals of Investing

- Most investors are simply trying to increase the stock of their money in liquid assets.

# Investing



# Investing



# Structural Problems in Investing

- If you do not have money in liquid assets, you cannot play this game.
- Many investors forget that most investments fail. They do not invest initially as if they need to be involved in 10 companies.
- Investors underestimate the delay between investing and cashing out.
- Save enough money to fund the follow-on capital needs of your early successes. If you don't, the new investors will devalue your initial investment.

# Proverbs for Investing

- Those who come first to the hill may sit where they will.
- Cheap things are not good. Good things are not cheap.
- Do the head work before the hand work.
- You must speculate to accumulate.
- Begin in time to finish without hurry.
- Everybody's business is nobody's business.
- Nothing ventured, nothing gained.

# Investing - 2

- One coin makes more noise in an empty box than a full one.
- Who begins too much, accomplishes little.
- In for a penny, in for a pound.
- It is lost labor to sow where there is no soil.
- The customer is always right.

# Books on Proverbs

- *Dictionary of Proverbs*, Claremont Books, London, 1994.
- Gleason, Norma (Ed), *Proverbs from Around the World*, Citadel Press, NY 1992.
- De Ley, Gerd, *International Dictionary of Proverbs*, Hippocrene Books, NY 1998.
- Fergusson, Rosalind, *The Penguin Dictionary of Proverbs: Second Edition*, Market House Books, 2000.
- Jennifer Speake (Ed), *Oxford Dictionary of Proverbs*, Oxford University Press, NY, 2004.