

# Value World

Summer 2007

Published by SAVE International

## THE VALUE OF INFORMATION

*Craig L. Squires, AVS*

*Presented at the SAVE International 2007 Annual Conference*

### INTRODUCTION

There is a well known saying, “Knowledge is Power.” This is a subjective statement, but most people accept it as reasonable and accurate. What type of power is it that knowledge brings? It could be exclusive, timely or better quality knowledge than others that gives them the power. Some types of information can impact the results and outcomes as it is applied to make decisions. What types of information, if improved, would make a difference in making better decisions? And, better yet, is it possible to place a specific value on the types of information that establishes such power?

This paper will seek to establish a reasonable foundation for determining the value of any type of information. The objective is to develop a process and supporting terminology to allow practitioners to conduct meaningful analysis on any type of information to more clearly determine its value and/or worth.

Value Analysis has its strong foundation in functions and the five step job plan to determine the best approach to improving value. The objective of this paper to suggest ideas that may contribute to the Value Analysis process for helping to determine the value of information and clearly identifying ways to improve it. This paper will not provide all the mechanisms, metrics or models of analysis. Rather, it will strive to define the thought process and attributes that create value in such a way that mechanisms, metrics or models can be created based on them.

### The Currency Theories

The first key relationship in establishing the value of information is in understanding its relationship to money. This may seem like an unusual starting point, but in fact it is the cornerstone to understanding the value of information.

This foundation of this value concept is the First Currency Theory which states:

All currency is data &  
All data is currency

Any currency that exists or will exist is data, whether it is a dollar bill, a piece of gold, or a monetary number in checking account at a bank. Likewise, all data that exists is currency, whether in computer systems, in newspapers or magazines, in patents or in someone's head. This relationship is unique because it is the foundation of all commerce. Understanding currency as data may initially be easier to understand than data as currency, but when the relationship is fully understood then "currency as data" and "data as currency" can be modeled in new and powerful ways.

The essence of this theory is that currency and data have a relationship that is symbiotic. What affects one currency will usually have an impact on the other. And, although all types are symbiotic, they are not usually equivalent. Value of any type of currency can be improved through better understanding of its characteristics, and its relationship to other currencies.

*Currency types and data types are symbiotic, but not usually equivalent.*

Modern economics has been evolving for the last 250-300 years, and economic theory has become increasingly sophisticated over time. The vast amount of research related to economics is focused on money as currency (which is also tied to currency as data), while data as currency has had its own vast research, though not necessarily in the role it plays in economics. By viewing data as a currency, one can begin to examine economic theories and models that apply to monetary currency and see how they will also apply or be directly related to the value and economics of data/information.

Monetary currency (money) will be referred to as **\$-Currency or \$C**.

Data currency (information) will be referred to as **D-Currency or DC**.

### ***\$-Currency***

First and foremost, the function of \$-Currency in Function Analysis terms is to *Facilitate Exchange*. The primary characteristics of \$C includes the following:

1. A standard unit of value: value that is divisible and accountable. (Divisible refers to the fact that \$-currency can be divided into smaller parts or combined into greater ones).
2. A medium of facilitating exchange: the \$C has general (not necessarily universal) acceptance within a market system.
3. A standard for managing finances: this includes all types of accounting, banking and financial arrangements such as deferred payments
4. A store of value: the \$C will retain its value in relation to the items for which it is exchanged. Economics and economic policies can obviously impact the value over time.

### ***D-Currency***

With regards to information and data, its function as D-Currency is to *Facilitate Decisions*. Every value exchange that is facilitated by \$C requires a decision on the part of the buyer and seller. Decisions are made by each party relative to the value and worth they place on the goods or

services being exchanged. DC (information) is the currency that facilitates these decisions. The primary characteristics of DC include the following:

1. Not typically a standard unit of value: not usually a value that is divisible or accountable
2. A medium of facilitating decisions:
3. A medium for managing knowledge
4. Relative worth depends on Value Factors

In a FAST model, the relationship between the function of \$C and DC would be represented in the “When” direction and would be read “When we facilitate decisions we facilitate exchange.” This is a key functional relationship between Decision Currency and money as \$-Currency. Both currencies have their own characteristics; and can have strong dependencies on each other.

The Second Currency Theory states:

*Any impact on decisions will impact exchange.*

Some examples of these dependencies include:

- When the availability of decision currency is increased or decreased it will impact exchange.
- When decision currency is upgraded or degraded, it will also impact exchange.
- Decision currency can influence psychology (confidence or panic), politics and public opinion, to name a few...all which will impact the markets where exchange occurs.

Those with greater power to impact decisions will have great influence on the impact of exchange. This helps explain more clearly the reasons behind the notion that knowledge is power.

## **THE ROLE AND IMPORTANCE OF MONEY**

Money in one form or another is at least as old as recorded history, and has been shown to evolve in societies as soon as specialization occurs in order to facilitate exchange. And, although money has existed for a very long time, historians have yet to find an example of perfectly functioning money. In many cases, money has been on the opposite side of the spectrum leading to great economic dysfunction including substantial market inefficiencies and eventual loss of financial viability.

Considerations within a society with regards to \$-Currency includes:

1. Safety
2. Income
3. Liquidity

Despite repeated failures of various types of money, it remains incredibly important to the modern, global economy as the world continues to diverge into greater aspects of specialization and exchange. Although the history of money is deep and complex, the following is an attempt to summarize very briefly the evolution of money into four major categories.

1. Barter/Exchange
2. Early Currency Systems
3. Evolution of paper as an accepted representation of value
4. Evolution of data as an accepted representation of value

### ***Barter***

Barter as a mechanism of exchange has existed throughout the history of man. It is simply an exchange of one item for another, where both parties agree to accept the values of the items being exchanged in the transaction as acceptable for the purpose of trade. This system can be very effective in small communities, and even in large ones, but it can quickly reach limitations that prevent it from becoming a widespread system. The major pitfalls of barter include; 1. In the absence of a monetary system, goods and services lack a common unit of value with which to measure and account. 2. The lack of “double coincidence of wants” where someone who wants a given commodity also possesses the commodity desired by the other party. 3. Absence of standard units of value detracts from ability to put in place standardized financial management systems, like accounting, accounts payable/receivable.

Similarly, valuable assets such as land, stocks, furniture and houses can be a store of value. However, in relation to money there are potential downsides including:

1. Inherent costs of storage, distribution.
2. Value of items may volatile relative to the value of money.
3. Many items are difficult to exchange quickly, and therefore lack liquidity, which may force loss of value in conversion to money or other assets.

### ***Early Currency Systems***

Even the earliest of civilizations developed money, which was used as a store of value. As long as people in a given society generally accepted the item being used as money in exchange for their own goods and services, then the money maintained a value with which to exchange goods and services. Many types of non-metal, non-paper currencies have been employed even in the short history of the United States including shells, beaver pelts, and tobacco.

### ***Paper Currency Systems***

The earliest notable versions of paper money were in the form of notes issued by banks to represent an exact store of value as indicated by the official description indicated on the note, which value was formally stored by the bank. The earliest notes were issued for both land and precious metals, such as gold and silver. In essence, the notes themselves represented a real quantity of either metal or land that was either in store, or secured by the bank. A note representing a pound of gold meant that the bank had the pound of gold in its vaults, for which the note could be exchanged at any time by any party holding said note. However, it didn't take long before banks realized they could issue a greater number of notes than the actual amount of reserves on the premise that not every person holding a note would not arrive to redeem the notes all at the same time. As long as everyone trusted the system of value and the entity behind it (in this case the bank), then things operated smoothly. However, as soon as concern about the viability of the notes came into question, usually due to questions about the viability of the place where said val-

ue was stored (the bank), then the system quickly collapsed. In the early days of banking, when a rush on the bank to redeem notes occurred, if the bank could not assure the people who desired immediate exchange that their notes would still be viable in the future, and everyone sought to redeem the value of the notes in metal or land, then the bank had no choice but to close its doors.

Over a period from about 1600 to the early 1900s, paper currency went through much iteration of acceptance and failure, on a banking level and, in many cases, more dramatically on a national level.

Paper as currency began to really gain acceptance when countries began to take over and assert their sovereignty of the currencies circulating within their borders. As countries pushed the idea of paper money as a truly acceptable representation of value, it was done primarily with the backing of gold as the reserve currency to back up that value. In this case, citizens could go to a bank and redeem a note for its value in gold. However, as described already, this was an imperfect system and could be readily challenged if all parties holding notes tested the system at the same time. These difficulties were overcome by cooperation among various banks, and by the assurance of trusted governments that the currencies in circulation had the full backing of the government. Over time, the percentage of gold actually represented by the paper currency gradually declined and in the U.S. the gold standard was eliminated in 1972.

### ***Data Currency Systems***

Even from the early days of banking when most transactions were handled in coins or precious metal, many transactions did not involve the physical movement of gold, land or currency from one place to another. Rather, accounts were handled via a ledger system of credits and debits to track the amount of value each person or entity had stored in the bank. As currency progressed and as banks became more sophisticated in their systems of transferring value from one account to the other. When the Information Age began, the world of banking was forever changed. Information about accounts and money was stored in computer-based information systems, and any properly authorized amount could be easily moved from one account to the next. Just as precious metals and other stores of value represented a small part of the overall system when paper became a widely utilized currency, data and the tracking of value in data systems came to exceed greatly the amount of paper currency. By the year 2000, paper currency represented less than 5% of all U.S. currency in “circulation.” The rest of the money supply continues to be stored simply as “data.” Paper money no longer represents a store of precious metals; it has come to only represent digital data in a bank account. This system remains viable due to the trust in the governments backing the currency systems. So in more than just a figurative sense, all currency is data.

## **THE ROLE AND IMPORTANCE OF INFORMATION**

Just as money has existed in many forms as currency throughout history, data as a Decision Currency has also existed. The primary difference between the history of \$currency and Decision Currency is in the general liquidity of each in relation to the other. Great efforts were made to create systems of production, distribution and acceptance of \$-currency. The distribution of D-Currency, and its recognition as a store of value has been much less clearly defined, but it has

nevertheless existed.

Currently, it may be possible to determine the worth of a certain piece of information, but there is no way to do this consistently for all information as it exists in diverse and complex situations. Therefore, methods of determining information value need to be expanded and enhanced.

## PRIMARY FACTORS OF INFORMATION VALUE

As explained earlier, the role of information as D-Currency is to Facilitate Decisions. When we look at how the value of information is determined, it must be a different system of “accounting” than the system used to track and account for money.

In review, the characteristics of D-Currency are as follows:

1. Not typically a standard unit of value: not usually a value that is divisible or accountable
2. A medium of facilitating decisions:
3. A medium for managing knowledge
4. Relative worth depends on Value Factors

As described in point #4, the relative worth of D-Currency can be calculated by examining how it exists in relation to the following factors:

*#1 Strategy:* Strategy involves factors of FUNCTION as it relates to tactics, policies and general operating environment.

*Function:* Function Analysis and FAST modeling are a part of dimensioning strategic factors and is very effective in clearly mapping the thought process related to tactics, policies and operating environment in order to improve decisions.

*#2 Quality:* Quality involves factors of TRUST due to quality of grade & class of data including its level of Accuracy, Accessibility and Appropriateness.

*Accurate:* It may be possible to get a decision right by experience or gut instinct from time to time. But over time, inaccurate or distorted data will absolutely affect the quality of decisions being made based on it. In order to make better decisions, it is worthwhile to improve data accuracy. Data, no matter how accessible or appropriate, is of no value if it is not accurate.

*Accessible:* Ironically, the people who most need important information are often the ones most separated physically from it. Data, no matter how accurate or appropriate, is of no value if it is not accessible.

*Appropriate:* One of the biggest challenges in any organization is to locate the most appropriate information and to deliver it to the appropriate people at the appropriate time. Data, no matter how accurate or accessible, will only be a distraction if it is not appropriate.

*#3 Urgency:* Urgency involves factors of TIME including the necessity and importance of data within a continuum. Data that is practically worthless in one continuum can have great value when factors of urgency are introduced.

*#4 Importance:* Importance involves factors of COMPARISON and WEIGHT with regards to attributes of value. Factors of importance can be determined by various methods of comparison and weight, including the “Paired Comparison” method utilized in Value Analysis.

*#5 Risk:* Factor of understanding RISK. The more clearly risk is understood, the better one can make decisions about how it fits into decisions. Risk related to time is especially a key relationship.

*#6 Economy:* Factor of VALUE as an aspect of economics and general market forces. This factor is one that directly intersects with money including how Facilitating Decisions impacts Facilitating Exchange.

*#7 Spectrum:* Factor of OCCURRENCE, SCALE, DIMENSION.

OCCURRENCE includes statistics, timetables, plans including variety and range. SCALE involves measurements affecting value.

DIMENSION involves PLACE including location and existence or not of relationships, dependencies and associations between various data.

## CONCLUSIONS

Traditional economic theory has considered in great detail the impact of money in the realm of value and exchange. Historically, the realm of Data Currency has not been given the proper consideration for the impact of information and its role in facilitating decisions in order to facilitate exchange. Just as regular business audits and financial statements provide a measure of value for businesses present and future prospects, a similar approach must be developed to measure how the Factors of Information Value impact the present and future prospects of a business and related shareholder value.

By better understanding the dynamic relationship between various types of currency, including information, its value can be better understood, modeled, predicted and accounted. The terminology and definitions outlined in the Primary Factors of Information Value will contribute to the ability of practitioners, economists, accountants, analysts and shareholders to conduct meaningful analysis on any type of information to more clearly determine the value and/or worth of a business.

## AUTHOR INFORMATION



As Managing Partner of nwis.net, Craig Squires has successfully led the business to significant achievements with major global businesses. He embraces his involvement in Value Analysis and Value Methods. Craig currently serves as the Vice President of Global Affairs for SAVE International. As a professional facilitator and consultant, he has worked on projects in a wide range of industries including energy, technology, large accounting and professional service firms, resorts/hotels, large retail centers, banks, tourism, and more.

nwis.net  
P.O. Box 131106  
The Woodlands, TX 77393 USA  
(281) 681-3860  
Email: [craigs@nwis.net](mailto:craigs@nwis.net).