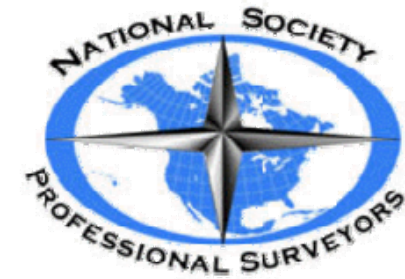




National Technical University  
of Athens



Federation of International  
Surveyors



National Society  
Professional Surveyors

# Sustainable Real Estate Markets & the Task Force on Real Estate Market Study

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- Task Force Members / Contributors
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# Supporting Institutions, & the Environment they Operate In

# Key Aspects Underpinning Real Estate Markets

1. Country Level Political, Legal & Socio-economic Data
2. Resource & Environmental Data
3. Property Market Supporting Infrastructure
4. Real Estate Sector Data
5. Conclusions & Inferences

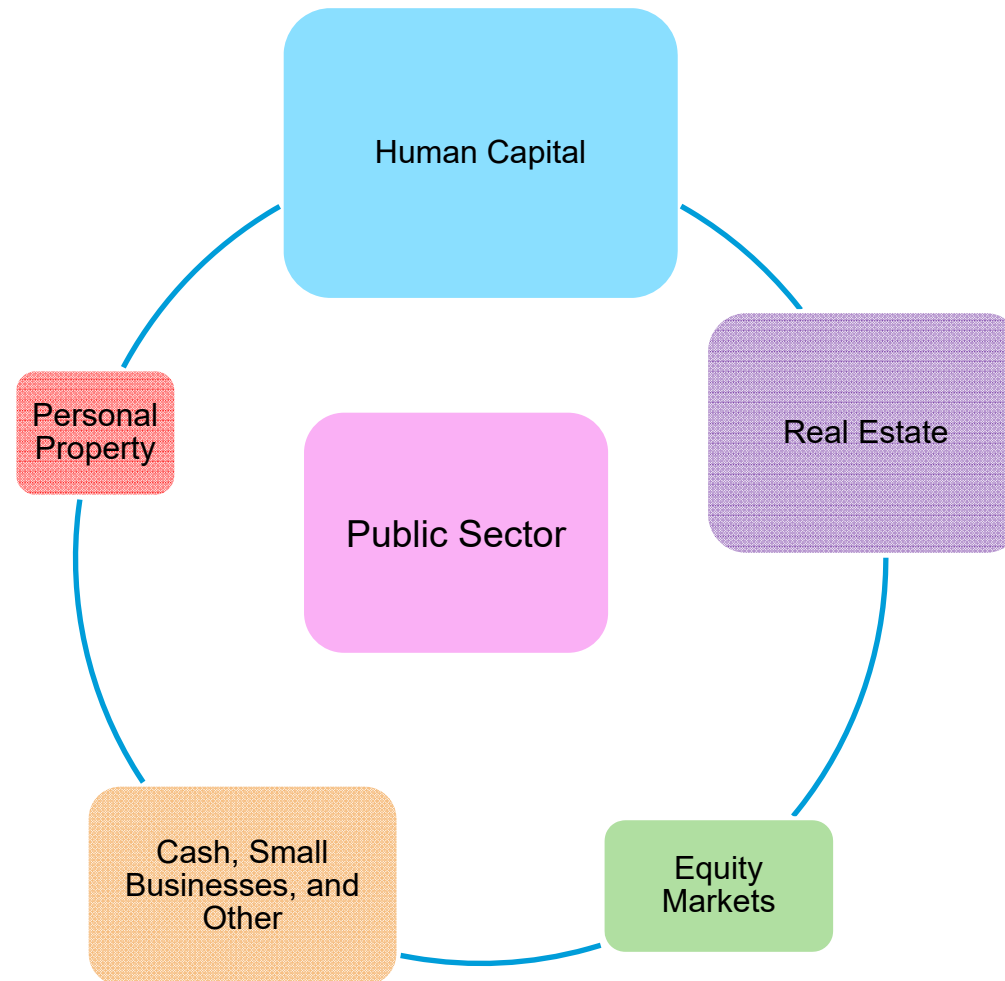
This model taken to greater depth can be adaptive through historical analysis, predictive, and optimizing.



# National Economic Value Components

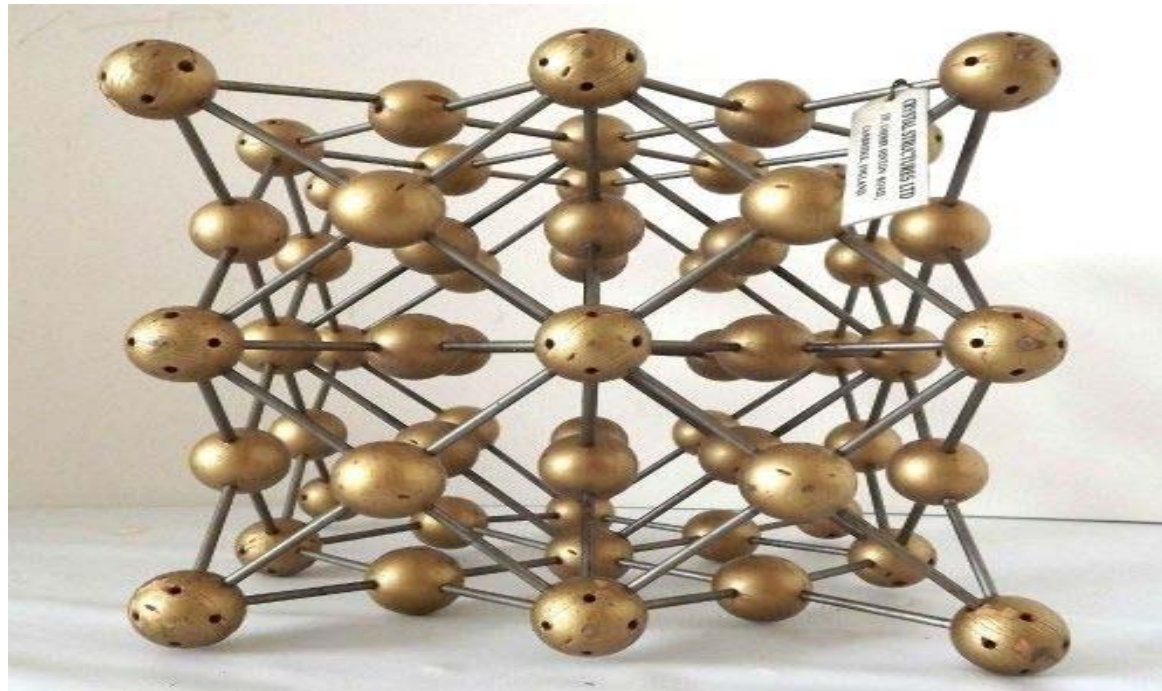
## External Factors:

- Broad Market Influences
- National Antagonists
- National Protagonists
- Core Trade Markets

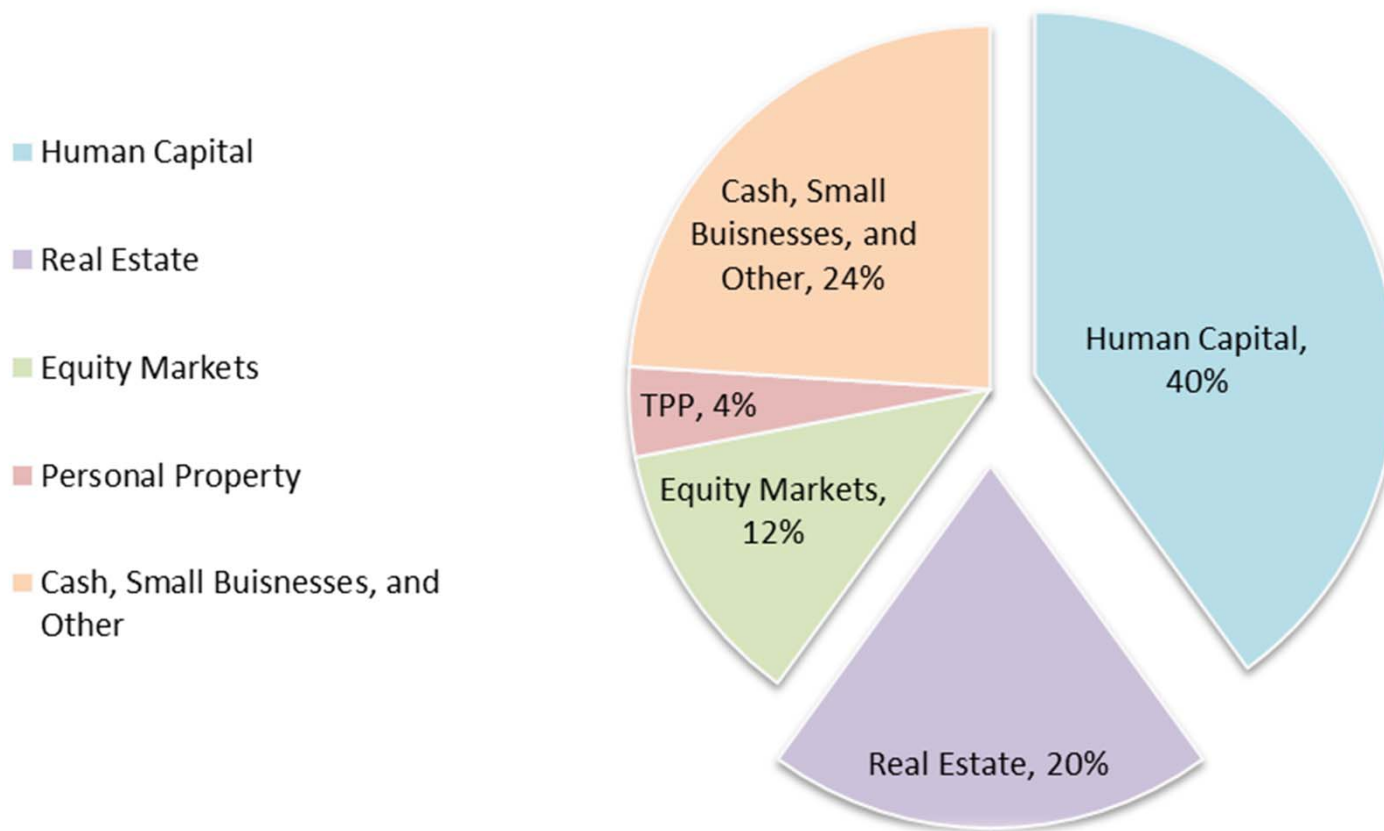




Interconnectivity of Societal, Market,  
Environmental & Resource Structural  
Elements (nothing operates in a vacuum)



# Gross National Private Sectorial Values



These Ratios are for the United States.





## Country level data (socio economic data)

Labor, employment, education/skill, age, political, legal, medical/insurance/health, social security, population, average/median income, infrastructure, raw materials, industries, energy, food, security, governmental, credit market depth & types, factors of production, environmental information/risks, & reliability index of data.

Main goal & focus is transparency of data, with standardization and broad coverage.





Data sources or similar ongoing studies;

World Bank Doing Business

CIA World Factbook

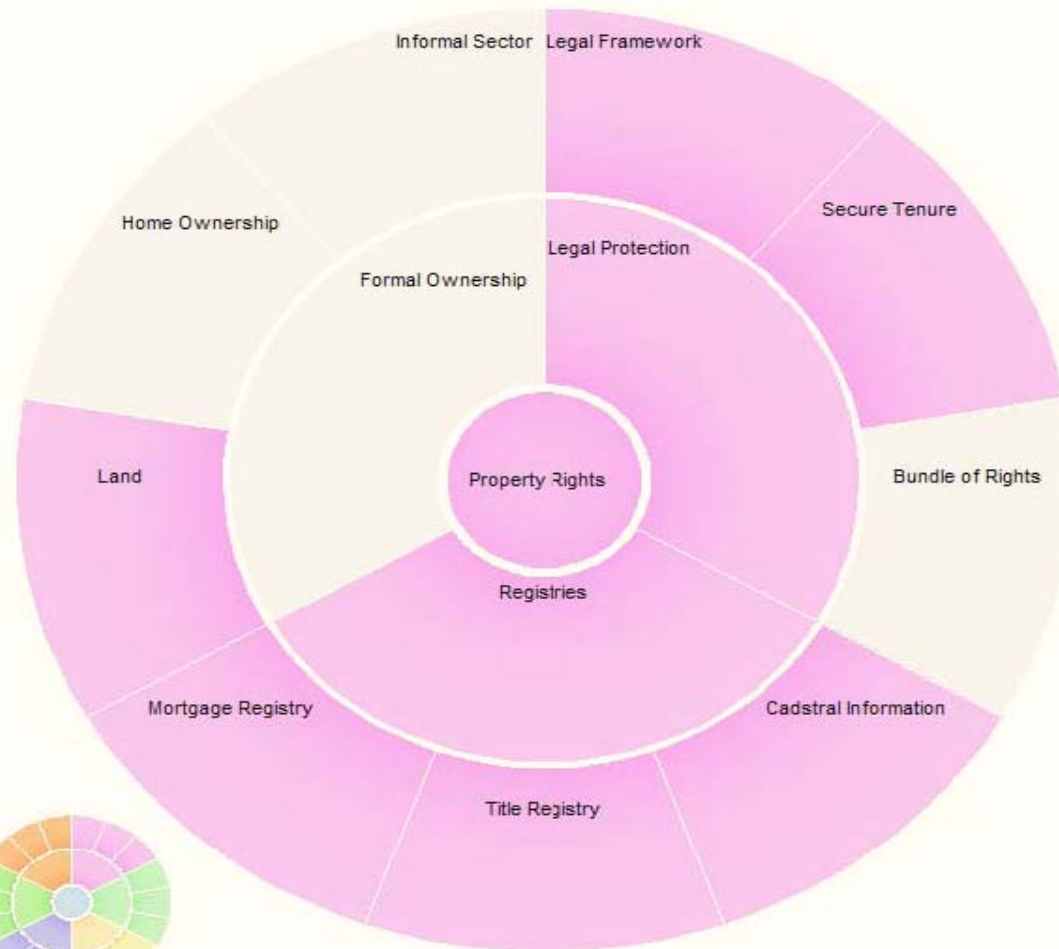
UNECE Country Profiles

Etc...

# Property Market Foundation



# Property Rights



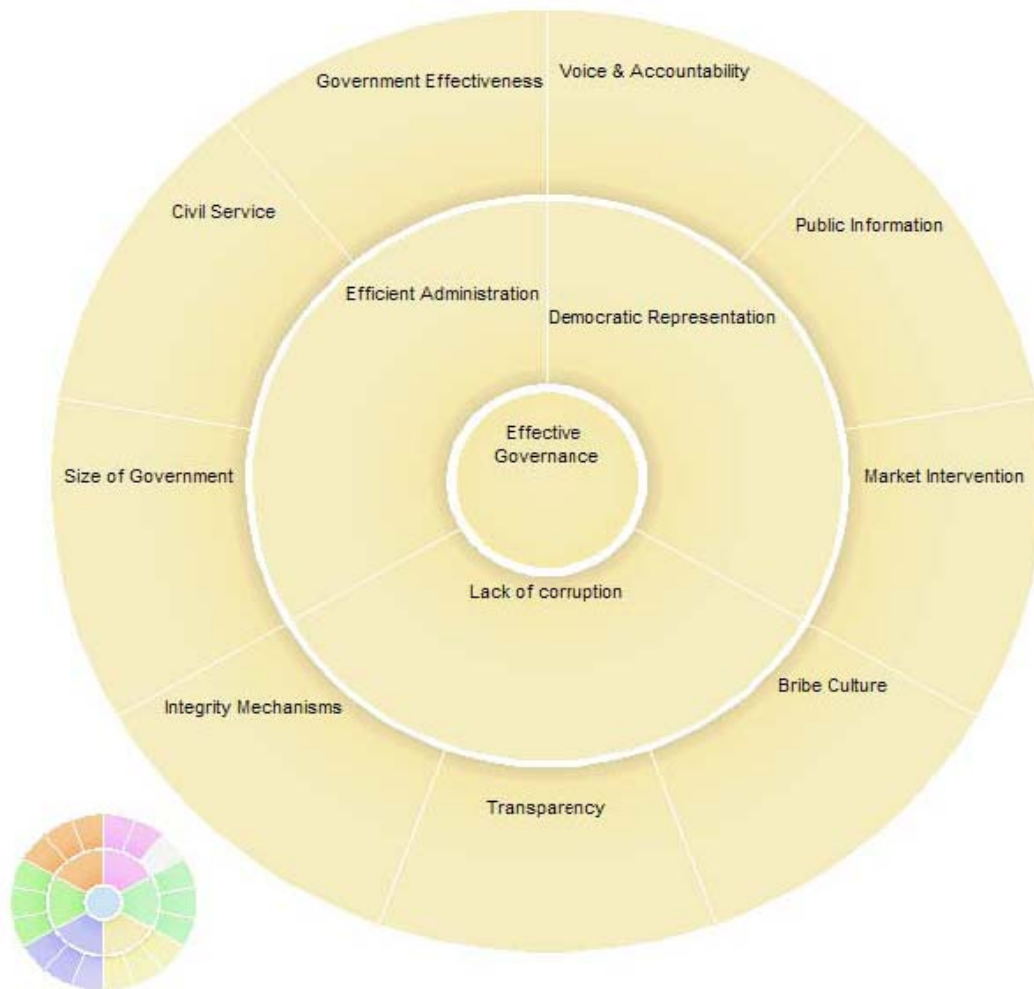
- **Goal – Property rights that are legally protected, secure, recorded in a single, accurate, electronically assessable registry and that lead to high levels of formal ownership for all citizens**

# Access to Credit



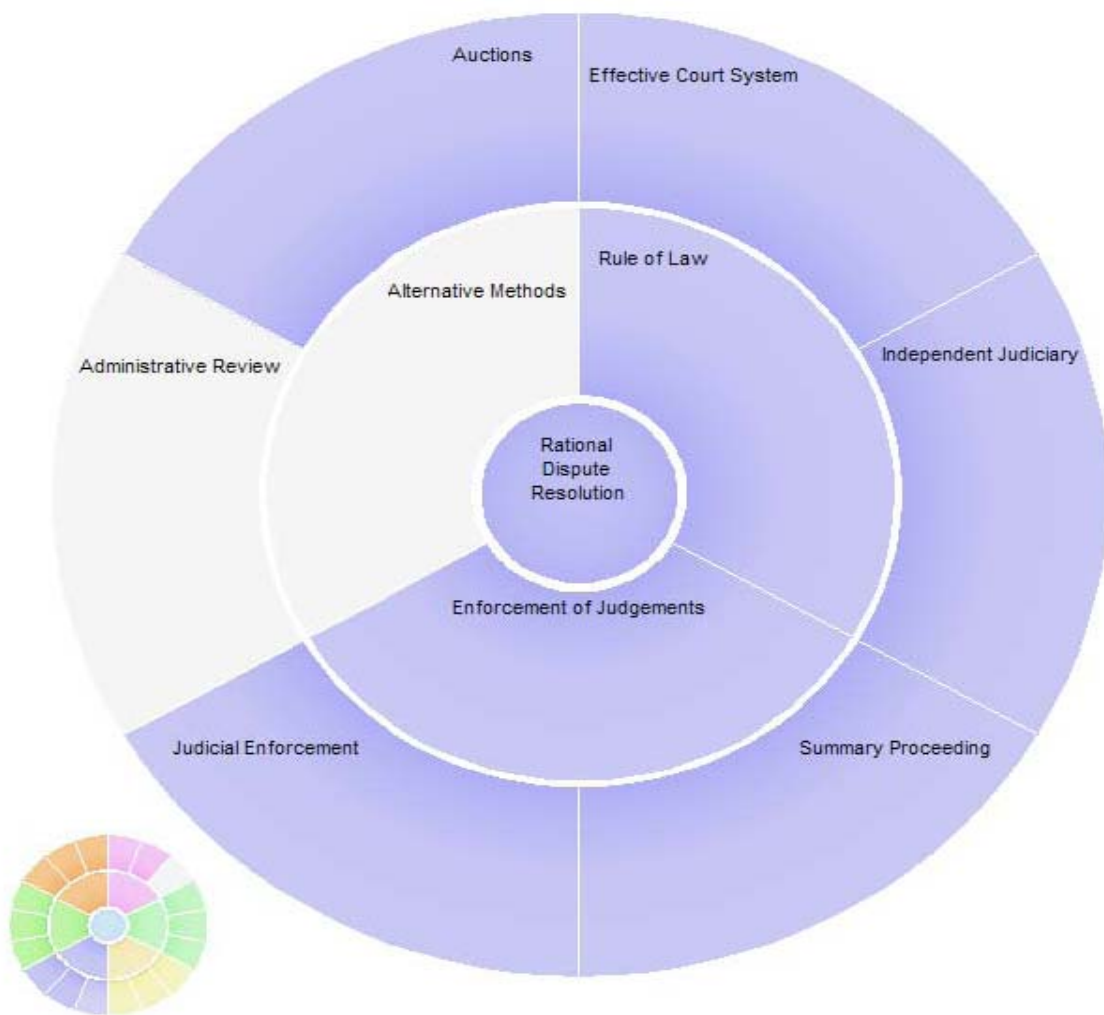
- **Goal – An efficient financial sector that allocates the resources saved by a nation’s citizens as well as those entering the economy from abroad to their most productive uses. It includes a sound, trustworthy and transparent banking sector, well-regulated securities exchanges, venture capital, and accessible credit information.**

# Effective Governance



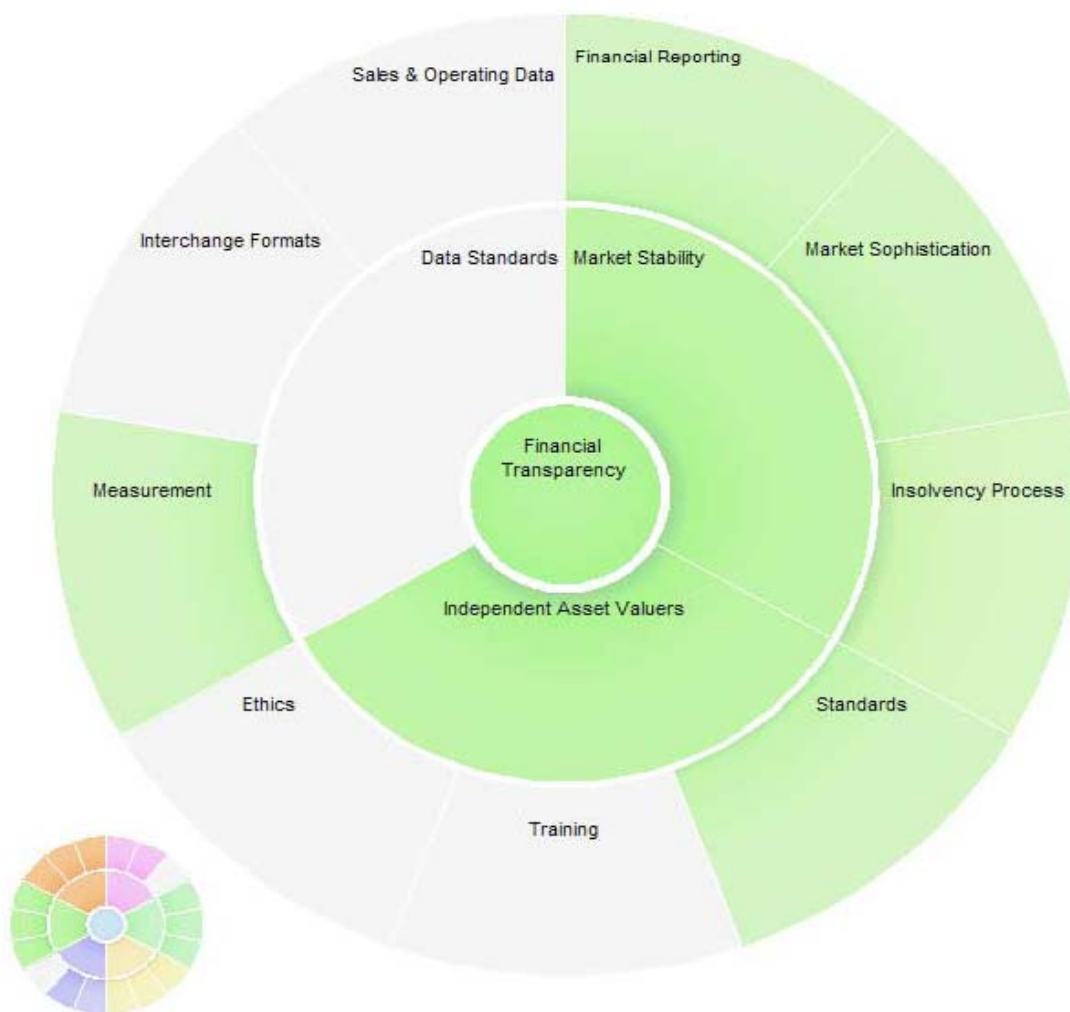
- **Goal: A system of government in which citizens freely make political decisions by majority rule combined with guarantees of individual human rights and the rights of minorities.**
- **A government free of corruption and functioning efficiently enough to meet the needs of the people.**

# Rational Dispute Resolution



- **Goal: An efficient institutional framework that balances the rights of the public, owners, lenders and borrowers in the event of a dispute or loan default**

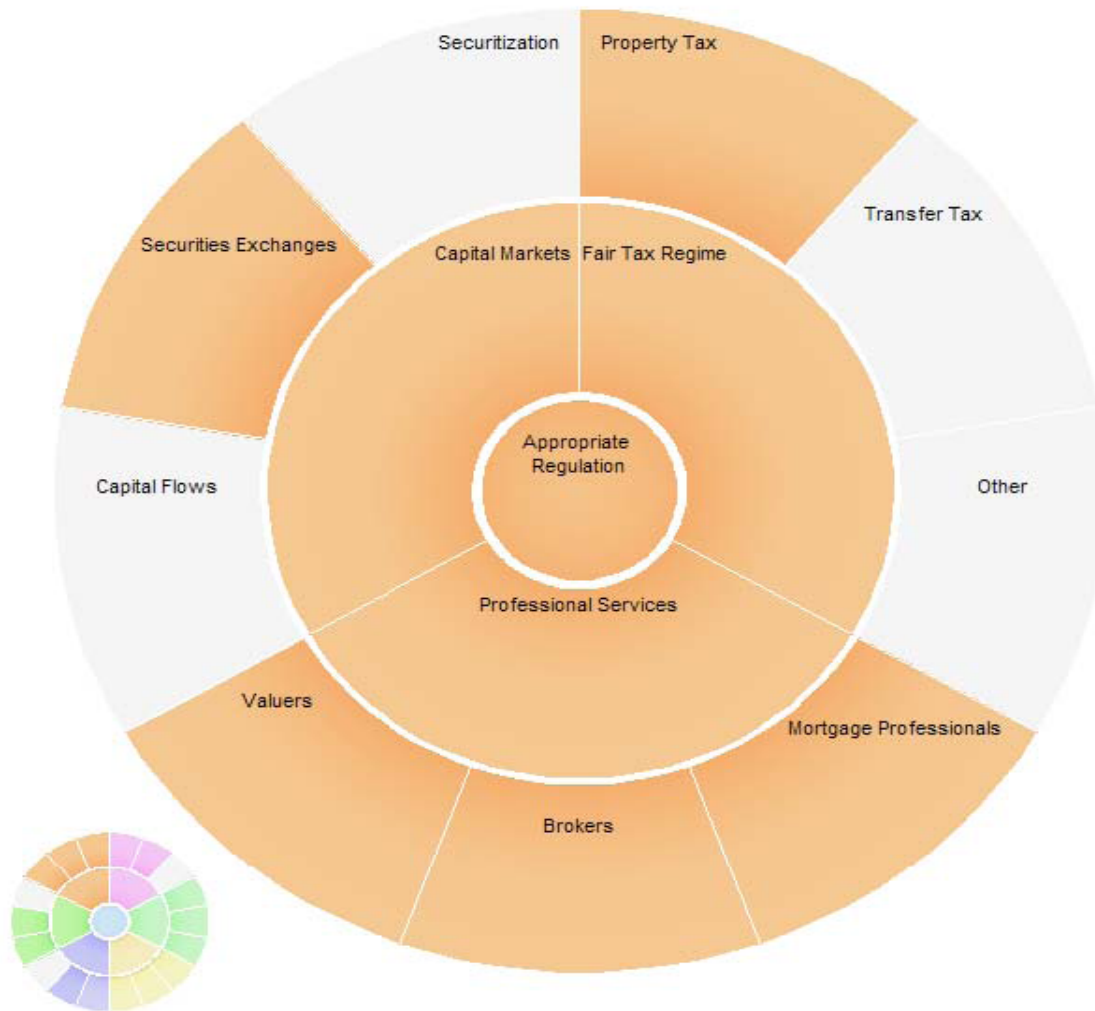
# Financial Transparency



- **Goal: A highly developed and transparent financial system including policies, institutions and trained and ethical professionals that contribute to effective financial intermediation and deep and broad access to capital and financial services**



# Appropriate Regulation



- **Goal: A comprehensive regulatory regime that is transparent, efficient, simple in its implementation and that leads to investments with the highest rate of return**

# Property Market Foundation





Real estate sector data  
Small residential

Housing Stock Inventory  
Average & median home price  
Trends in home prices over time  
Trends in prices relative to changes in wages  
Average & median home age  
Percentage of housing stock that are Flats and trends  
Adequacy of both quantity & quality



Large residential / Multi-family projects

Multifamily stock total units

Average & median rental prices

Trends in rent levels over time

Trends in rent relative to changes in wages

Average & median project age

Adequacy of both quantity & quality

Adequacy of regional distribution of product

Average & median price per unit & trends over time

Occupancy rates over time

Expense per unit & trends over time

Capitalization rates achieved & trends over time



## Social Housing

Social housing stock total units

Discussion of income or rent generated

Discussion of expenses incurred and how they are paid

Age & quality of stock

Trends over time for all relevant factors

Adequacy of both quantity & quality



## Office

Office stock (square meters)

Mix of rental and owner markets

Average & median rental prices

Trends in rent levels over time

Trends in rent relative to changes in wages

Average & median project age & size

Average & median price per unit & trends over time

Occupancy rates over time

Expense trends over time

Capitalization rates achieved & trends over time



## Retail

Retail stock (square meters)

Mix of rental and owner markets

Average & median rental prices

Trends in rent levels over time

Trends in rent relative to changes in wages

Average & median project age & size

Average & median price per unit & trends over time

Occupancy rates over time

Expense trends over time

Capitalization rates achieved & trends over time





## Industrial

Industrial stock (square meters)

Mix of rental and owner markets

Average & median rental prices

Trends in rent levels over time

Trends in rent relative to changes in wages

Average & median project age & size

Average & median price per unit & trends over time

Occupancy rates over time

Expense trends over time

Capitalization rates achieved & trends over time



Vacant and agricultural

Stock of vacant and agricultural land (hectares)

Quality of agricultural land

Trends & human effects on arable land quality

Sufficiency of agricultural lands

Land parcel sizes and consolidation

Zoning, planning, and efficient land use adequacy

Sampling of typical land prices per unit by expected use

# Conclusions and Inferences



## Detailed conclusions

This section notes conclusions for property sectors relative to economic, political, legal, environmental & social factors previously studied. It should also note and comment on data quality and quantity, and thus reliability.

Output is chart based and comparative. A wide ranging and historical study of regions of the world could allow adaptive and predictive algorithms to be created to forecast trends based on change, lowering risk & increasing investment & values across broad regions.

# Climate Change, Partial & Possible Solutions



**The financing required for an orderly transition to a low carbon, resilient global economy must be counted in the trillions, not billions.**

Significant investment in infrastructure is needed over the next 15 years - around \$90 trillion by 2030 – but it does not need to cost much more to ensure that this new infrastructure is compatible with climate goals.



1. Speak up! Convince government & others.
2. Power your home with renewable energy.
3. Weatherize, weatherize, weatherize.
4. Invest in energy-efficient appliances.
5. Reduce (hot) water waste, & buy better bulbs.
6. Actually eat the food you buy—and make less of it meat.
7. Choose more efficient home / office designs.
8. Pull the plug(s). The idle load is significant.
9. Drive a fuel-efficient vehicle (walk, bike, work from home).
10. Maintain your vehicle (proper tire inflation, etc.).
11. Planes, trains, and automobiles. Use less and use it



# Thank you!

“A good legal property system is a medium that allows us to understand each other, make connections, and synthesize knowledge about our assets to enhance our productivity”

- Hernando de Soto

