Role of Rice Futures Market in Southeast Asia

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$10 million Research Center Serving the U.S. Land-Grant Mission

- Research: focus on understanding and managing risk in agricultural and related markets, making use of both behavioral and traditional rational economic theories, with the end goal of improving the application of risk management tools and strategies.
- Teaching: focus on developing and offering a comprehensive program that educates students and industry participants about open and closed hedge risk management strategies in grain, financial, energy, and livestock markets.
- Outreach: focus on delivering research-based information and decision tools that assist industry participants in more effectively managing risk in order to improve the viability of their operations.

The need for a futures contract going forward

- Recent history has thrown up a myriad of unexpected events that have shocked prices.
- Ukraine Russia conflict
- The economic fallout of Covid, where commodity supply chains – which led to higher food price hikes – are still recovering.
- The growing threat of climate change and natural weather phenomena such as El Nino effects, will only increase commodity price volatility going forward.

- With all this in mind, having a tool – like futures – in place to help mitigate event induced price risk seems a reasonable policy goal.

Interview Questions posed to Asian rice experts

1. Is there a potential role of rice futures market in Southeast Asia for rice price risk management?

2. What do you see as major constraints/challenges for establishing a rice futures market in Southeast Asia for rice price risk management?

3. Are there potential for establishing a rice futures market in Southeast Asia and what institutional arrangement will be needed?

Potential value of developing an Asian rice futures contract

- Price Discovery

- Price Risk Management or Hedging

- Improve existing marketing system - provides traders/merchandisers with incentives to store and meet demand. Helps to reduce price spikes associated with unexpected supply and demand shocks.

What is a futures contract?

- A legal contract calling for the acceptance or delivery of a commodity of a specific quantity and quality by some future date
- The contract locks in a price for future delivery
- Futures markets are privately owned Exchanges that provide an organized auction marketplace for open and competitive trading in commodity futures contracts
- Contracts are settled in 2 ways:
- Physical delivery
- Offsetting

Who trades futures contracts?

- Hedgers – Firms that trade in physical commodity and want to remove price risk
- Speculators – Individuals who seek to profit from buying contracts at low prices and selling them at high prices
- Speculators play an important role in bearing price risk for hedgers and in helping to discover price

Price Discovery

- Trading between hedgers and speculators – the buying and selling of futures contracts – results in discovery of fair market prices for a commodity over a range of future periods

- These future prices are transparent and unbiased forecasts

- Futures prices provide everyone in the marketing system with signals as to when to buy and sell and for how long to store

- Future prices provide a benchmark with which forward contracts are priced

Hedging

- Locking in a price and removing price risk

	Cash Market		Futures Market	
	Buy	Sell	Buy	Sell
April				$5/bu

Hedging

- Locking in a price and removing price risk

	Cash Market		Futures Market	
	Buy	Sell	Buy	Sell
April				$5/bu
Harvest		$4/bu		

Hedging

- Locking in a price and removing price risk

	Cash Market		Futures Market	
	Buy	Sell	Buy	Sell
April				\$5/bu
Harvest		\$4/bu	\$4/bu	

Hedging

- Locking in a price and removing price risk

	Cash Market		Futures Market	
	Buy	Sell	Buy	Sell
April				$5/bu
Harvest		$4/bu	$4/bu	
			+$1/bu	

Effective Sale Price $4/bu cash price + $1/bu = $5/bu

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Hedging if price increases

- Locking in a price and removing price risk

	Cash Market		Futures Market	
	Buy	Sell	Buy	Sell
April				$5/bu
Harvest		$6/bu	$6/bu	
			-$1/bu	

Effective Sale Price $6/bu cash price - $1/bu = $5/bu

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Summary of Futures Benefits

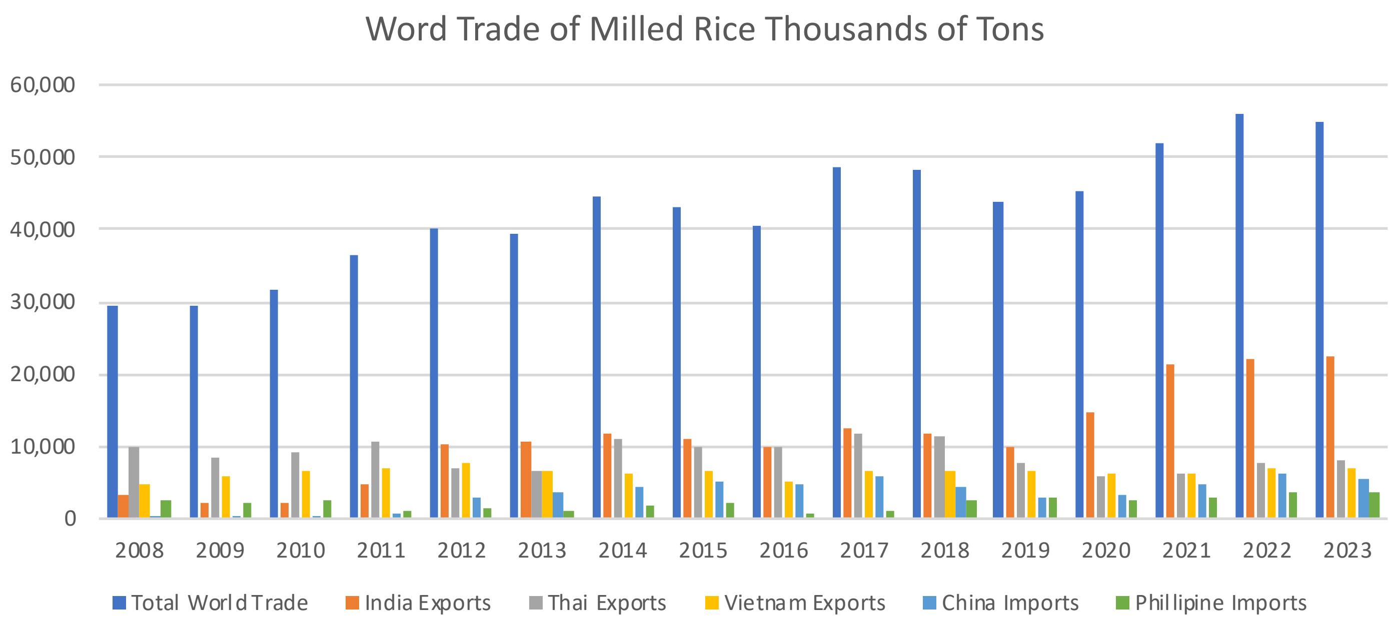
- All participants in rice marketing system can benefit from price discovery and price transparency – remove opacity of market
- Hedging and basis trading allows US merchandisers to derive greater profits from storing and trading rice over the course of a marketing year
- Futures markets provide incentives to make the marketing system more efficient and integrated between the marketing channels and guide the private sector in providing commodities when needed, avoiding problems associated with large shortages and surpluses

2012 Report Necessary conditions for a successful futures contract

- Adequate cash price volatility – attracts hedgers and speculators
- A large competitive and well-defined underlying cash market that lends itself to standardization
- Minimal government price intervention in cash markets
- Free flow of public information

Current factors that are more conducive to contract success

- The international/regional Asian rice market remains volatile, and in terms of size is bigger than in 2012.



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Current factors that are more conducive to contract success

- Greater internet access, which would make futures trading more accessible and cheaper to more people
- Greater internet access, cell phones and social media platforms has made information on prices more transparent
- blockchain technology which could better track cash market transactions across the supply chain has the potential to complement futures trading

Biggest Obstacles to a successful futures contract today

- Politicization of rice markets – the uncertainty of government intervention in markets (e.g., export bans) removes the incentive for speculators to trade

- The likely lack of willingness to participate by sophisticated traders who benefit from the status quo of market opacity

- a lack of future market risk management knowledge among a large potential pool of industry users

- a lack of publicly provided market information in Asian cash markets about traded prices, production, inventories etc.

- Legal enforcement of contracts

Given the Potential Benefits of a rice futures contract are so large how do we overcome the obstacles?

- In 2012, those who understood futures markets and would be sophisticated enough to use the contract likely didn't want it, while those who could benefit from it the most didn't understand it and wouldn't know how to trade it. This was a recipe for contract failure – in fact it is probably one of the main reasons why a successful Asian rice futures contract does not exist!

- We need to grow the pool of potential. Making accessible futures market education to all industry is vitally important to increase the potential hedging pool beyond the relatively small number of sophisticated firms who currently benefit from a lack of futures market price discovery.

Research Initiatives needed to enable contract success

- Conduct research on types of price risk faced by market agents across supply chains

- A comprehensive study is needed to determine who are the industry participants from farmers to consumers across Asian rice markets?
- What price risks are faced by these market participants?
- How are these price risks currently managed?
- Could a futures contract be used to manage the price risk?

Research Initiatives needed to enable contract success

- Provide Education for potential users/hedgers – match futures strategies to price risk (e.g., forwards versus futures)

- Once we have knowledge of the price risks faced by industry participants education programs explaining futures hedging can be targeted to key groups

- Fryar Center offers the only online degree in Commodity Risk Management in U.S., and we will offer Micro-certificate programs targeted to industry

Research Initiatives needed to enable contract success

- Research is needed to investigate seasonality and price correlations across supply chains and markets at both the regional and national levels

- A necessary condition for a functional futures contract is correlation between cash and futures prices and seasonality in cash prices enhances futures merchandising

- Need to conduct comprehensive time series analysis of price dynamics in Asian rice markets to determine what underlying cash market(s) to base a futures on. And determine if contact should be a regional contract or a domestic contract