



# The DNA of Risk

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**CRUYWAGEN IRMSA RISK FOUNDATION**

Steven Briers

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## What is risk?

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“A risk is a risk is a risk—  
they affect earnings  
potential, whether they come  
from fluctuations in  
commodity price,  
[equipment] fire, change in  
legislation, or adverse  
media.”

Bill Anderson  
Swiss Re New Markets

Sudden and unforeseen events

Variance

Volatility

Corporate failure

Unexpected change

Weakness

Non-performance

Opportunity

Non-compliance

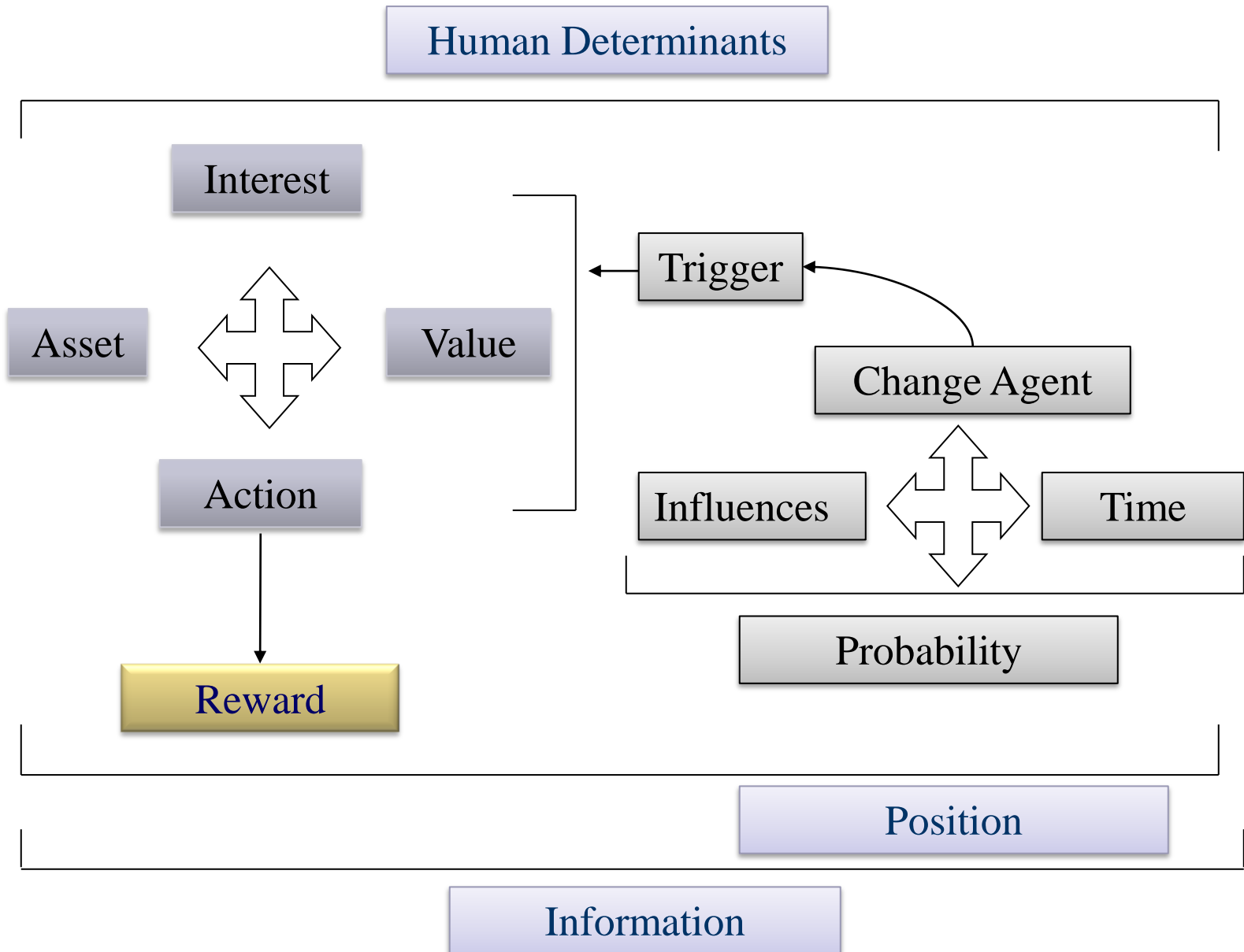
Exposure

## Definition: “risk”

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“Risk is **human behaviour** with **imperfect knowledge about future outcomes** which can **vary intended rewards.**”

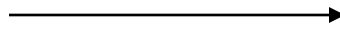
# THE DNA OF RISK



## Risk is always linked to a desired reward

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### Reward



Interest

Asset

Value

Action

Change agents

Influence

Trigger

Time

Probability

Position

Human determinants

Information

### Strategic goals

Financial targets

Operational targets

Organisational objectives

Business objectives

Governance objectives

Shareowner expectations

Stakeholder expectations

## Risk always involves interested parties

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Reward

**Interest**

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**Shareowners**

**Suppliers**

**Customers**

**Employees**

**Authorities**

**Communities**

**Partners**

**Industry bodies**

**Creditors**

**Debtors**

**Competitors**

**Regulators**

**Media**

**Financiers**

## Risk always has a subject matter

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Reward

Interest

**Asset** →

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***Dynamic Assets***

**Value-based assets**

**Legal assets**

**Human assets**

**Physical assets**

**Product assets**

**Intellectual assets**

**Financial assets**

**Technology assets**

***Static Assets***

**Land**

**Buildings**

**Equipment**

**Reserves**

## Risk always affects value

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Reward

Interest

Asset

**Value**

Action

Change agents

Influence

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Time

Probability

Position

Human determinants

Information



**Financial value**

**Strategic value**

**Competitive value**

**Time value**

**Replacement value**

**Political value**

**Economic value**

**Reputation value**

**Perceived value**

**Market value**

**Social value**



## Risk relates to action

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Reward

Interest

Asset

Value

**Action** →

Change agents

Influence

Trigger

Time

Probability

Position

Human determinants

Information

**Incoming processes**

**Purchasing**

**Recruiting**

**Acquisitions**

**Outgoing processes**

**Advertising**

**Investments**

**Franchising**

**Financial actions**

**Instruments**

**Transactions**

**Systems**

**Change actions**

**Projects**

**Innovations**

## There is always a change agent in risk

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Reward

Interest

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Value

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**Change agents**

Influence

Trigger

Time

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Position

Human determinants

Information



**Climate**

**Competition**

**Crime**

**Currency**

**Inflation**

**Interest rates**

**Labour**

**Legislation**

**Location**

**Markets**

**Pricing**

**Social change**

**Technology**

**Timing**

## Risk is always shaped by influencing variables

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Reward

Interest

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Change agents

**Influence**

Trigger

Time

Probability

Position

Human determinants

Information



**Accumulation**

**Aggregation**

**Availability**

**Background**

**Complexity**

**Continuity**

**Correlation**

**Criticality**

**Cycles**

**Dependency**

**Diversification**

**Duration**

**Proximity**

**Simultaneity**

**Volatility**

## Risk is realised by a trigger

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Reward

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**Accident**

**Breach**

**Breakdown**

**Cancellation**

**Default**

**Delay**

**Emission**

**Failure**

**Fault**

**Interruption**

**Malfunction**

**Negligence**

**Omission**

**Shortage**

## There is always a time dimension to risk

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Reward

Interest

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Value

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Change agents

Influence

Trigger

**Time**

Probability

Position

Human determinants

Information



**Cyclical factors**

**Seasonal dynamics**

**Timing**

**Duration**

**Simultaneity**

**Regional differences**

## Risk always has some degree of probability

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Reward

Interest

Asset

Value

Action

Change agents

Influence

Trigger

Time

**Probability**

Position

Human determinants

Information



### **Statistical measures**

**Likelihood**

**Correlation**

**Volatility**

**Aggregation**

**Timing**

**Relative frequency**

## Risk is shaped by the existing controls

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Reward

Interest

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Change agents

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Trigger

Time

Probability

**Position**

Human determinants

Information

**Financial Positions**

**Hedging**

**Insurance**

**Securitisation**

**Management Positions**

**Compliance**

**Contingencies**

**Control**

**Diversification**

**Risk Positions**

**Avoidance**

**Monitoring**

**Prevention**

**Protection**



## Lack of perfect information shapes every risk

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Reward

**Probability information**

Interest

**Control information**

Asset

**Compliance information**

Value

**Performance information**

Action

**Market information**

Change agents

Influence

**Value at risk**

Trigger

**Earnings at risk**

Time

**Cash flow at risk**

Probability

**Cost of losses**

Position

**Yield curves**

**Information** →

**Capital at risk**

Human determinants


**Stability ratios**

**Liquidity ratios**



## There is always a human determinant in risk

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Reward	<b>Complacency</b>
Interest	<b>Compromise</b>
Asset	<b>Concealment</b>
Value	<b>Denial</b>
Action	<b>Risk-taking</b>
Change agents	<b>Decision making</b>
Influence	<b>Error</b>
Trigger	<b>Negligence</b>
Time	<b>Omission</b>
Probability	<b>Trauma</b>
Position	<b>Unauthorized</b>
Information	<b>Stress</b>
<b>Human determinants</b>	<b>Pride</b>
	<b>Power</b>
	<b>Perception</b>



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