The art of ART: Non-traditional solutions as a powerful risk management tool

August 28, 2009 – Kathrin Anne Meier – Presentation to SAV Frauen
The art of ART

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Key Features of ART

- Provider of non-traditional structured (re)insurance and finance solutions

- Established by Allianz SE in 1997 to be the global center of competence for the alternative risk transfer business and to develop synergies between banking and insurance

- Wholly-owned subsidiary of Allianz Global Corporate & Specialty AG

- Allianz Risk Transfer AG (Zurich) Rated AA (long term) and A-1+ (short term) by S&P

- 55+ employees worldwide

- Figures 2008: Net earned premiums: CHF 1‘111m, net income CHF 34m, total assets CHF 2‘805m, total shareholder‘s equity: CHF 506m
ART Organization

<table>
<thead>
<tr>
<th>License</th>
<th>Insurance / Reinsurance</th>
<th>Class 3 Re/Insurer</th>
<th>EU Re/Insurance</th>
<th>Reinsurance intermediary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parental Guarantee by ART Zurich</td>
<td>Parental guarantee by ART Zurich</td>
<td>Service company</td>
<td>Service company</td>
</tr>
<tr>
<td></td>
<td>Asset Mgmt</td>
<td></td>
<td></td>
<td>Asset Mgmt</td>
</tr>
</tbody>
</table>

| Employees | 30 | 8 | Shared Staff | 4 | 16 |

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August 28, 2009
Range of ART Solutions

Global retention management programs
Multi line / multi year
Captive B/S protection
Global fronting

Equalisation reserve volatility
Adverse development
Loss portfolio transfer

Structured Insurance
Structured Reinsurance
Structured Investments
Alternative Asset Management

Allianz Risk Transfer

Debt
Equity
Mezzanine Enhancement
Future Flow Placement
Hedging
ILS

Advanced risk intermediation
Insurance risk transformation
<table>
<thead>
<tr>
<th>Corporate Solutions</th>
<th>Reinsurance</th>
<th>Insurance Linked Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ Solutions driven by clients motivation</td>
<td>§ Solutions driven by clients’ desire to manage risk over longer period of time</td>
<td>§ Insurance Risk seen as an excellent risk diversifier</td>
</tr>
<tr>
<td>§ Manage client’s overall risk in line with their risk appetite</td>
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<td>§ Facilitate investor access to insurance risk</td>
</tr>
<tr>
<td>§ Fill gaps not catered for by traditional markets</td>
<td>§ Transformation of insurance risk to financial markets</td>
<td>§ Regulatory reasons why buyers cannot hedge directly with investors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>§ Enables hedging through non-traditional products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>§ Bermuda balance sheet, as regulatory environment allows for transformations</td>
</tr>
</tbody>
</table>
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Alternative Risk Transfer as a Risk Management Tool for Corporates

Enterprise-wide risks

Operational Risks

Financial Risks

Others

Assess Risks

Client’s Risk Appetite (severity, frequency)

Avoid / Reduce Risk

Transfer Risk

Manage Risk

Prevention

Insurable

Difficult to Insure

Use of Captive

Uninsured

Risk Engineering Services, Safety measures, etc.

Insurer

Fronting

With or without fronting

Captive

Corporate solutions (Structured retention management and/or other structured insurance/reinsurance)

Reinsurance market
Multiple Risk Protections Funnel SIR’s and Multiple Perils into one ART Aggregate Cover

All SIR’s are aggregated at Allianz Risk Transfer level and are part of one overall limit.
ART Structure Provides Significant Multi-Year Protection
Example: Manufacturer of Sport Equipment

“GIP” = General Insurance Program (property, casualty, cargo)
Bonus = Bonus payments to sport players under contract

Maximum contributions to the UNL calculation of the AXL Layer
• GIP EUR 10.5m per annum and EUR 27.0m in total for 5 years
• Bonus EUR 2.5m per annum and EUR 7.5m in total for 5 years
Example: Nuclear Power Plant

Business Interruption for Nuclear Power Station

- Accident left damaged fuel rod elements in a sealed chamber
- No insurance available for clean-up
- ART structure multi-section cover:
  i. €40m property / BI during clean-up
  ii. €20m pa / €60m agg BI on other units if claim under (i) for 4 further years
  iii. €4.6m BI on all units if (i) commuted for 2 further years
- Premium: (i) initial payment at inception, adjustable upon loss to section; (ii) annual premium; (iii) nil (included in premium for (i))
Example: Insurance Linked Solution

Investor Access to Cat Insurance Market

- ART writes portfolio of US cat reinsurance and cedes it to special purpose vehicle via capped quota share.

- Quota share limit is above 100% of gross modeled loss of portfolio (max(AIR, RMS)).

- Collateral as security under the quota share:
  - cash collateral in the amount of 100% net modeled loss
  - additional collateral in form of reinsurance (ILWs)

- ART participates in margin on reinsurance contracts, charge for leverage provided and profit commission
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Risks and Mitigants at ART

- Tailor-made structures (wordings, ...)
- Different types of transactions / underlyings

- Experienced professionals
- Strong underwriting / approval process
- Managing correlation / portfolio diversification

- Global sharing of resources and know how
- Comprehensive limits system
- Close surveillance of in-force book (quarterly updates)
Multiple Sign-Offs are part of the Underwriting Process

In addition: Finance & accounting sign-off, compliance tests (financial crimes risk assessment), overall executive sign-off
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ART’s Portfolio Management Approach

- **Law of Large Numbers**
  - Portfolios of many like risks

- **Portfolio Theory**
  - Portfolio of many unlike risks
  - Correlation of risk
  - Sub-limits for risk sources
ART’s Modeling Methodology

- Cat Events
- Other Events

Monte Carlo Simulation

- Deal 1
- Deal 2
- Deal 3
- Deal 4
- Deal 5

- P/L
- Balance Sheet
- Cash Flow

Economic Scenarios

Stochastic Simulation of Insurance and Economic Events
Events Are the Basis of the ART Portfolio Model

Economic and financial scenarios (barrie+hibbert Economic Scenario Generator)
- Interest
- Equity Indices
- FX
- Credit Default Rates
- GDP, CPI

Cat scenarios
- RMS based for main regions and perils, tailored to fit with ART Portfolio Model
- additional own Cat scenarios

Other market event scenarios
- Per risk industry loss
- Aviation
- Accountants liability

Deal-specific events (uncorrelated)

General principle: All potentially volatile components are modeled stochastically, however focused on identified main risk drivers.
The ART Portfolio Model Allows for Sophisticated Portfolio Analysis

- Portfolio Economics
- Profitability Studies
- Accounting Volatility
- Risk Based Capital
- Stress Scenarios
- Tail Analysis
- Limits Utilization

ART Portfolio Model
ART’s Risk Bucket Approach

Maximum Exposure per Risk Bucket = planned annual operating profit
“Full is full”
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Conclusion

ART transactions are a powerful risk management tool

- Structured solutions to fit client’s needs
- Tailor-made to client’s risk appetite
- Inclusion of „uninsurable“ risks
- Access to banking and insurance market

ART’s clients benefit from ART’s approach to assess and manage risk

- Experienced professionals from reinsurance, insurance and banking
- Experts in accounting, actuarial and legal
- Strong UW process, incl. approval process
- Sophisticated portfolio modeling
- Comprehensive limits system
- Proactive portfolio management
Thank you for your attention

For more information please contact kathrin.meier@art-allianz.com