Aboriginal rights Aboriginal title, establishment of, 316 claims, suggested clauses, 321-323 consultation, process for, 318-321 duty to consult and accommodate, 317-318 generally, 313-315 risk assessment, 214 accounting, costs and budgets, 149-151 acknowledgement and consent, terminology in credit agreement, 185-186 administration agreement, 83 airports and air transportation, risks, 617-618 annual management plan, terminology in credit agreement, 186 **Bank** Act, 481 Basel Committee on Banking Regulation, 22-23, 62 biomass power projects, 507-508, 517-519 bonds advantages and disadvantages for finance structure amortizing bonds, 375 bullet bonds, 376 deferred interest bonds, 376 serial bonds, 375-376 bond offering structures, 25-26 documentation, 380-382 borrower representatives, 149 bridge finance, definition, xxvii bridge projects collateral/security, 494-496 covenants, 504-505 diligence, 498-499

financing, purpose, 493-494 ownership issues, 496-497

risks, 618-620

```
bridge projects — Continued
specialized terms, 499-504
timing risks, 497-498
broadcasting, film and game industry
collection agreements, 466
commissioning, 362
completion guarantees, 466-467
funding sources
  gap financing, 467
  generally, 459-466
parties, 459
pledge holder agreements, 467
risks, identifying and evaluating, 459
Canada Transportation Act (CTA), 429-434
change orders and cost overruns
causes, 277-278
costs, 281-283
generally, 273-275, 613
identifying and controlling, 275-277
monitoring, 278-280
sponsor equity contribution, 280-281
closing agenda, 168-170
collateral agency agreement, 80-83
collateral/security
bridge projects, 494-496
entertainment facilities, festivals, 452-453
generally, 42-47
railcars and rail transportation, 429-431
commercial operation, terminology in credit agreement, 186-187
commissioning
definition, 359
examples
  gaming facilities projects, 362
  highway project, 361-362
  hydro-electric project, 360-361
  wind power project, 361
```

role of independent engineer in certifying commissioning, completion,

and turnover, 366-368

```
commissioning — Continued
terminology in credit agreement, 187-188
commitment letters, 163-165
completion of project
completion payments in highways projects, 490-492
definitions, 362
final completion examples
  gaming facilities project, 365
  highway project, 365
  senior care facility project, 362-365
risk, 612-613
role of independent engineer in certifying commissioning, completion,
and turnover, 366-368
substantial completion examples
  gaming facilities project, 363
  highway project, 363-364
  wind power project, 363
terminology in credit agreement, 188-189
turnover, 365-366
conditions precedent
closing, to, 104-111
drawdown, to, 111-115
construction
construction period insurance, 249-254
construction period roles and participants, 38-41
financing generally, xx-xxii
loan, definition, xxv
risk, 234-235, 246-247, 612-613
consultants
financial advisor to lenders, 356-357
independent engineer
  contract review by, 352-353
  project engineer, distinguished from, 349-352
  reports, 338
  role in project finance, 337-338
  scope of work, 343-349
  terminology in credit agreement, 193
  tools to assess projects, 339-343
independent insurance consultant, role of, 353-355
```

consultants — *Continued* independent quantity surveyor, role of, 355-356

cost overruns, see change orders and cost overruns

costs

change orders and cost overruns, 281-283 completion, terminology in credit agreement, 188-190 maintenance, terminology in credit agreement, 193-195 project, terminology in credit agreement, 196-197

covenants

bridge projects, 504-505 environmental risk, 236-240, 292-295 financial, 174-179 generally, 115-118, 371 mining industry, 470-472 negative, 130-133 specialized, 118-129

credit agreement terms

acknowledgement and consent, 185-186 annual management plan, 186 commercial operation, 186-187 commissioning, 187-188 conditions precedent, 104-115 consultants, 193 cost to complete, 188-190 covenants, 115-133 default, events of, 133-137 definitions, 138-143 demobilization, 190 environmental liabilities, 190-191 exhibits, 138 generally, 93-94, 185 industry practice, 191-193 land rights, 179-180 Loan Syndications and Trading Association (LSTA), model provisions, 549-555 maintenance costs, 193-195 project costs, 196-197 regulatory terms, 575-578 renewable energy projects, 519-524 representations and warranties, 94-104

credit agreement terms — *Continued* schedules to agreement, 137-138

credit crisis of 2008

structuring requirements after, 62-64

credit wrap structure

documentation, 76-79 elements of, 68-70 example, 7-16

currency risk, 218, 615

cyber security issues, 586-591

debt issuance, common adjustments, 379

default, events of, 133-137

definitions

bridge finance, xxvii construction loan, xxv contractors, 6 credit agreement, in, 138-143 debt, 147-148 equity, xxvi financial covenants, sample definitions, 174-179 financial guaranty, xxvii mezzanine lenders, 5 mezzanine or quasi equity financing, xxvi mortgage, xxvi non-recourse, xxvi operator, 6-7 payment assurance, xxvii performance guarantee, xxviii personal property security, xxvii project, xxvii project financing, x proponent, 4 quasi equity financing, xxv-xxvi recourse, xxvi risk and return, xxvi secured loan, xxvii senior debt, xxv senior lenders, 4-5

definitions — Continued special purpose vehicle, xxvii, 3-4 sponsor, 4 subordinate lenders, 5 subordinated debt, xxv take out funding/lender, xxv, 5-6

demobilization

punch list and, 227-228 terminology in credit agreement, 190

derivatives, 146

design-build-finance-maintain model (DBFM), 414

design-build-finance model (DBF), 414

design-build-finance-operate-maintain model (DBFOM), 415

design-build model (DB), 413

dispute resolution

dispute resolution boards, 222 generally, 157-158 jurisdiction, 161

documentation

administration agreement, 83 closing agenda, 168-170 collateral agency agreement, 80-83 commitment letters, 163-165 completion guarantee, 80 due diligence, 165-166 environmental reports and materials, 166-167 financial covenants, sample definitions, 174-179 force majeure clauses, 181-184 guarantee, 79-80 guarantee assurance agreement for credit wrap structures, 76-79 Know Your Customer requirements, 170-172 land rights, 179-180 perfection certificates, 172-174 reports and opinion, 167-168 revenue, 201-204 risk assessment, 217

drawdown, conditions precedent to, 111-115

due diligence

deliveries, 165-166 insurance for project finance, 267-271 process, 48-51 requirements, 53-54

enforcement of security, 155-157

engineer, independent

contract review by, 352-353
project engineer, distinguished from, 349-352
reports, 338
role in certifying commissioning, completion, and turnover, 366-368
role in project finance, 337-338
scope of work, 343-349
terminology in credit agreement, 193
tools to assess projects
computer models, 340
procurement activities, 342
project change management plan, 342-343
project master schedule, 341-342
risk-critical areas identified, 340
timeline risk analysis, 339

engineer, project

engineering services, 350-351 generally, 349-350 management services, 351-352 procurement services, 351

entertainment facilities, festivals

case study, 454 challenges, 454-455 collateral/security, 452-453 financing, 451-452 funding sources, 455-457 revenue streams, 451 sites, 451 sponsors, role of, 453

environmental issues

covenants addressing environmental risk, 236-240, 292-295 environmental assessment process, 287-292 environmental liability insurance, 260-261

environmental issues — Continued

generally, 285-287 liabilities, terminology in credit agreement, 190-191 questionnaire and indemnity, 300-312 regulatory jurisdictions, 287 remediation, effect of, 298-300 reports and materials, 166-167, 295-298 representations, warranties, and covenants, 292-295 risk assessment, 214-215, 220, 614-615 studies, 295-298

equity

cure rights, 148-149 definition, xxvi funding, generally, xxiii-xxiv support/sponsor, revenue source, 205-207

exchange of information, 145-146

Federal Administration Act, 425

festivals

case study, 454 challenges, 454-455 collateral/security, 452-453 financing, 451-452 funding sources, 455-457 revenue streams, 451 sites, 451 sponsors, role of, 453

film industry, see broadcasting, film and game industry

finance markets

comparison of debt markets, 370 covenants, 371 deal timetable example, volatile market, 380 debt instruments, advantages and disadvantages amortizing bonds, 375 bullet bonds, 376 deferred interest bonds, 376 serial bonds, 375-376 exempt market offerings, 388-391 generally, 369-372 market based finance tools

```
finance markets — Continued
market based finance tools - Continued
  credit substitution for rating, 396-398
  hedging support, 398-400
  sequenced bonds, 400-401
private debt market
  economic infrastructure, 393
  growing requirement for infrastructure replacement, 392
  infrastructure, definition, 393
  regulated infrastructure assets, characteristics, 395-396
  sectors and subsectors of infrastructure, 393
public debt markets
  common adjustments, 379
  debt issuance, features, 372-374
  debt securities markets and exchanges, 384
  documentation for public bond issuance, 380-382
  foreign investors, 384
  listing requirements, 385-387
  structures used for debt issuance, 376-378
risk assessment for debt issuance, 382-384
financial advisor to lenders, role of, 356-357
Financial Crimes Enforcement Network (FinCEN), 561
financial guaranty, definition, xxvii
Financial Transactions and Reports Analysis Centre (FINTRAC), 573-
574
force majeure
clauses, 181-184
risk, 17
foreign investment promotion and protection agreement (FIPA), 157
foreign investment, restriction affecting project finance, 334-335
free trade area (FTA), 157
game industry, see broadcasting, film and game industry
gaming facilities projects
commissioning, 362
final completion examples, 365
substantial completion examples, 363
```

guarantee

completion, 80 documentation, generally, 79-80

guarantee assurance agreement for credit wrap structures, 76-79

health and safety regulation affecting project finance, 325-326

heritage regulation affecting project finance, 333-334

highway projects

commissioning, 361-362 completion of project, 365 completion payments, 490-492 integration issues, 487-490 public/private partnership project agreements, 483-484 risk allocation during construction, 484-487 substantial completion, 363-364 tolling, 487-490

hydroelectric and nuclear power projects

commercialization and take out risk, 541-542 commissioning, 360-361 completion risk considerations, 539-541 features of large scale projects, 525-527 hydroelectric power projects, characteristics, 527-533 nuclear energy projects, characteristics, 533-535 power purchase agreements, 542 risks, 620-623 standards and triggers, 535-539

ICSID Convention, 157, 161

IFRS accounting standards, 22, 62, 67, 150, 480

immigration restrictions affecting project finance, 335

importation restrictions affecting project finance, 335-336

industry practice, terminology in credit agreement, 191-193

infrastructure

economic infrastructure, 393 growing requirement for infrastructure replacement, 392 infrastructure, definition, 393 regulated infrastructure assets, characteristics, 395-396 risk factors and mitigants, 245-248

infrastructure — *Continued* sectors and subsectors of infrastructure, 393

insurance

business interruption insurance, 257-259 construction period insurance, 249-254 consultant, independent, role of, 353-355 due diligence, 267-271 environmental liability insurance, 260-261 errors and omissions insurance, 254 flood, earthquake, and hurricane insurance, 264-267 generally, 267-271 operational period insurance, 255-257 political risk insurance, 261-262 rail industry, 432-433 terrorism insurance, 262-264

intellectual property

definitions, 597-599 generally, 597 representations and warranties example clauses, 601-610 generally, 599-601

interest rate risk, 233-234

internal rating base (IRB), 23, 62

invitation to tender (ITT), 408-409

jurisdiction

choice of, 54-55, 158-159, 161 dispute resolution, 161 environmental control, 160-161 financial controls, 160 government involvement, 160 property and security interests, 159-160

Know Your Customer requirements, 170-172

land rights

Aboriginal land rights, *see* Aboriginal rights credit agreement drafting requirements, 179-180 sufficiency, 240-242

leases and purchases, revenue source, 211

liens and holdbacks, risk assessment, 232-233

Loan Syndications and Trading Association (LSTA), model credit agreement provisions, 549-555

market based finance tools

credit substitution for rating, 396-398 hedging tools, 398-400 sequenced bonds, 400-401

material contracts, lender rights, 242-245

mezzanine or quasi equity financing

definition, xxvi generally, xxiii

mining industry

credit agreements, specialized clauses documentation and security, 472-474 generally, 469 representations, warranties, and covenants, 470-472 risks, 469-470 mining debt, 474-478 regulation affecting project finance, 330-333 structures, specialized and synthetic, 478-482

model credit agreement provisions, 549-555

mortgage, definition, xxvi

natural resource development affecting project finance, 329-330

non-recourse, definition, xxvi

nuclear power projects, see hydroelectric and nuclear power projects

operational risk and mitigation, 247-248

payment assurance, definition, xxvii

pension plans

equity funding and, xxiv mezzanine or quasi equity financing and, xxiii representations and warranties, 97-98 senior secured take out financing and, xxii-xxiii

perfection certificates, 172-174

performance guarantee, definition, xxviii

permits and licences

requirements, 228-232 risk assessment, 215

personal property security, definition, xxvii

political risk

generally, 17, 615 insurance, 261-262 mining project, 473-474 nuclear energy project, 534 power projects, 508 risk assessment for debt issuance, 383

ports and water bridges, risks, 620

power generation and transmission regulation affecting project finance, 328-329

power projects, see also hydroelectric and nuclear power projects

biomass power projects, 517-519 credit agreement terms, 519-524 generally, 507-508 solar power projects, 512-517 wind power projects, 508-512

PPP, P3, see public/private partnerships (PPP)

privacy laws and regulations, compliance, 591-596

private debt market

economic infrastructure, 393 growing requirement for infrastructure replacement, 392 infrastructure, definition, 393 regulated infrastructure assets, characteristics, 395-396 sectors and subsectors of infrastructure, 393

professional sports

case studies, 447-449 facilities, designing, 440-441 financing sources, 441-443 generally, 437-438 interested parties, 438-440 league rules, 445-446 ownership and financing structure of team, 447 revenue sources at venue, 444-445

professional sports — *Continued* venue investment considerations, 443-444

project, definition, xxvii

project finance, generally

basic structure, 3-7 bond offering structures, 25-26 collateral, 42-47 credit wrap structure, 7-16 due diligence, 53-54 five key aspects, 1-3 fundamental questions of lender, 29-32 general introduction, x-xxviii jurisdiction, choice of, 54-55 risk mitigation, 16-21 structure concepts, 21-25, 33-38 timing risk issues, 41-42 transaction steps, 47-53

proponent, definition, 4

public debt markets

common adjustments, 379 debt issuance, features, 372-374 debt securities markets and exchanges, 384 documentation for public bond issuance, 380-382 foreign investors, 384 listing requirements, 385-387 structures used for debt issuance, 376-378

public financial assistance, types and structures

generally, 419-420, 424 loan guarantee programs, 422-423 loans/grants/cash advances, 420-422 tax refunds and credits, 423-424

public/private partnerships (PPP)

agreements for highways, 483-484
definition, 411
delivery models
alternative services delivery model, 415-416
design-build-finance-maintain model (DBFM), 414
design-build-finance-operate-maintain model (DBFOM), 415

```
public/private partnerships (PPP) — Continued
delivery models — Continued
  design-build model (DB), 413
distinguished from traditional project finance, 412
generally, 410-411
PPP procurement process, 416-419
request for proposal (RFP), 408-409, 416-418
request for qualifications (RFQ), 416-417
when PPP procurement model appropriate, 416
public sector participation in project finance
federal regulatory framework, 403-406
grants, 209-211
lending to public entities, 425-426
provincial and municipal regulatory framework, 406-408
public financial assistance, types and structures
  generally, 419-420, 424
  loan guarantee programs, 422-423
  loans/grants/cash advances, 209-211, 420-422
  tax refunds and credits, 423-424
public/private partnerships (PPP)
  definition, 411
  delivery models, 413-416
  distinguished from traditional project finance, 412
  generally, 410-411
  PPP procurement process, 416-419
  when PPP procurement model appropriate, 416
public procurement procedures, 408-409
punch list
definition, 227
demobilization and, risk assessment, 227-228
generally, 362
quantity surveyor, independent, role of, 355-356
quasi equity financing
definition, xxv-xxvi
generally, xxiii
railcars and rail transportation
Canada Transportation Act (CTA), 429-430, 433-434
collateral/security
  Canada, 429-430
```

railcars and rail transportation — Continued collateral/security — Continued primary vs. secondary documents, 431 reciprocity, 430 searches, 431 United States, 430 financing sources, 427-429 insolvency, 433-435 insurance requirements, 432-433 Safe and Accountable Rail Act, (SARA), 432 safety regulations, 433 United States Code (USC), 430-431, 434-435 recourse, definition, xxvi regulation affecting project finance anti-bribery, 571-573 anti-money laundering, 568-571 anti-terrorism, 568-571 compliance with privacy laws and regulations, 591-596 cyber security issues, 586-591 federal regulatory framework affecting public procurement, 403-406 foreign assets control, 578-585 foreign investment, restriction on, 334-335 generally, 567-568 health and safety regulation, 325-326 heritage regulation, 333-334 immigration restrictions, 335 importation restrictions, 335-336 Know Your Client, 567-571 mining industry regulation, 330-333 natural resource development, 329-330 politically exposed persons, 574-575 power generation and transmission regulation, 328-329 provincial and municipal regulatory framework affecting public procurement, 406-408 regulatory terms in credit agreements, 575-578 safety regulations in rail industry, 433 suspicious transactions reporting regulation, 573-574 transportation regulation, 326-328 remedies, generally, 26-27, 153-155, 161-162

renewable energy projects

```
renewable energy projects — Continued
biomass power projects, 517-519
credit agreement terms, 519-524
generally, 507-508
solar power projects, 512-517
wind power projects, 508-512
reports and opinion, 167-168
representations and warranties
environmental issues, 292-295
generally, 94-104
intellectual property
  example clauses, 601-610
  generally, 599-601
mining projects, 470-472
request for proposal (RFP), 342, 408-409, 411, 416-418
request for qualifications (RFQ), 342, 416-417
revenue sources
basic principles, 199-201
documentation, 201-204
equity support, 205-207
leases and purchases, 211
public sector grants, 209-211
risk assessment and mitigation, 217
sinking funds, 204-205
tolling, 207-209
risk and return, definition, xxvi
risk assessment and mitigation
authorization and approvals, 616
construction risk, 234-236, 612-613
generally, 16-21
identifying risks, 213-223
  aboriginal rights, 214
  access, 216
  completion of project, 18, 213-214, 223-227, 612-613
  contract terms to manage risk, 220
```

cost escalation, 216 cost overruns, 613 credit risk, 16

risk assessment and mitigation — Continued identifying risks — Continued currency risk, 218, 615 delay, owner-caused, 220-221 design and building material risk, 219 design-build contracts, 221 dispute boards, 222 documentation risk, 217 economic risk, 16-17 electronic records, 221 environmental risk, 214-215, 220, 236-240, 614-615 force majeure risk, 17 historic sites, 216 interest rate risk, 218-219 legal rights, 215 legal risk, 17 operation and maintenance risk, 222-223, 613 payment interruption, 217-218 permits, 215, 228-232 political risk, 17 pre-qualifying bidders, 219-220 priming claims, 216-217 refinancing or take out risk, 18 regulation, 218 revenue sources, 217 safety and soundness, 215 security, 218, 616 supply, 214, 613-614 syndication risk, 18 take out funding risk, 18, 19, 222 technical risk, 16 timelines, 213 timing risk issues, 41-42 infrastructure, 245-248 land rights, sufficiency of, 240-242 legal risk, 614 lender rights to material contracts, 242-245 liens and holdbacks, 232-233 offtake (revenue) risk, 614 operational risk, 613 overall risk, 612 punch list and demobilization, 227-228

risk assessment and mitigation — Continued supply risk, 613-614

risk assessment, debt issuance

non-hedged risk, 383-384 placement risk, 382 political risk, 383 refinancing risk, 383 spread risk, 382-383

Safe and Accountable Rail Act, (SARA), 432

secured loan, definition, xxvii

senior care facility project, final completion example, 362-365

senior debt, definition, xxv

senior secured take out financing

generally, xxii-xxiii

sinking funds, 204-205

social housing, risks, 623-624

solar power projects

credit agreement terms, 519-524 generally, 507-508, 512-517

special purpose vehicle

definition, xxvii, 3-4 requirements, 87-91 special purpose entity (SPE), definition, 88

structures in project finance

basic considerations, 33-38
domestic or international market, 37
integrated approach, 36
ownership, 35-36
term choices, 37-38
classic structures, 64-66
credit crisis of 2008, structuring requirements after, 62-64
generally, 57-62
key structure concepts, 21-25
selection criteria, 84-87
sophisticated structures
credit substitution requirements, 70-76

```
structures in project finance — Continued
sophisticated structures — Continued
  credit wrap structures, 68-70
  synthetic structures, 66-67
subordinated debt, definition, xxv
syndicated loans
agents, roles and responsibilities, 558-566
definition, 543
documentation, standard form, 549-555
inter-lender issues
  advances, 546
  appointments, 543-544
  assignment, right to, 545-546, 548-549
  bank's rights, 547-548
  default, 545
  jurisdictional issues, 546-547
  lender as agent, rights, 544
  priorities and preferences, 544
  releases and indemnities, 546
  rights and remedies of lender group, 545
  set off, 548
  voting approval requirements, 546
Loan Syndications and Trading Association (LSTA), model credit
agreement provisions, 549-555
syndications and participations, 555-558
take out funding
definition, xxv
risk, 222
tolling as revenue source, 207-209
transaction steps
conditions precedent, 52-53
documentation process, 52
due diligence process, 48-51
planning process, 47-48
transportation regulation affecting project finance, 326-328
turnover of project upon completion
generally, 365-366
```

turnover of project upon completion — *Continued* role of independent engineer in certifying commissioning, completion, and turnover, 366-368

United States Code (USC), 430-431

waste management facilities, risks, 624-625

water processing projects, risks, 625

wind power projects

commissioning, 361 credit agreement terms, 519-524 generally, 507-512 substantial completion examples, 363