

Basel II Pillar 3 Report

Market discipline



Basel II Pillar 3 Report at 31 December 2010
14 March 2011 / Banque Cantonale Vaudoise / Version 1.0

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This document is a translation of the original French document entitled “Bâle II - Pilier 3 – Rapport au 31 décembre 2010.” Only the French text is authoritative.

1. Objective and scope of this report

The objective of this report is to provide in-depth information on risk management at BCV to investors, analysts, ratings agencies and supervisory bodies. In particular, it describes the Bank's capital adequacy, its risk-assessment methods and the level of risk taken at BCV. This document was prepared in accordance with the Pillar 3 disclosure requirements set forth under the Basel II Accord together with Circular 2008/22 "Capital adequacy disclosure – banks" published by the Swiss Financial Market Supervisory Authority (FINMA).¹

1.1 Disclosure policy

For ease of access, this report is available in the investor relations section of BCV's website. As BCV is now subject to Basel II (since 1 January 2009), this report is updated on a half-yearly basis. It is published within two months following the end of the first half of the financial year and within four months following the end of the financial year, in accordance with Swiss regulations (FINMA circular 2008/22, margin numbers 54 and 55).

This version of the report corresponds to the year-end closing of accounts on 31 December 2010. The description of the Bank's governance, methods and processes reflects the situation at 31 December 2010; subsequent changes are not included.

The full-year Pillar 3 report is audited by the Bank's external auditor. The data contained in the Bank's Pillar 3 reports are calculated in accordance with Basel II regulatory capital requirements. This calculation process was audited as part of the IRB review carried out by FINMA. Furthermore, BCV's Internal Audit Department periodically reviews the process for calculating capital requirements (Basel II Accord, §443).

The appendix to this report contains information that is useful for understanding this document, including a description of business segments and a list of abbreviations.

The figures contained in the tables have each been properly rounded depending on the number of significant digits used for the table; this may result in discrepancies between listed column and row totals and the sum of individual column or row items.

1.2 Scope

The parent company within BCV Group is Banque Cantonale Vaudoise, a corporation organized under public law with its headquarters in Lausanne. The parent company has a branch office in Guernsey.

The list of companies that the Group is required to include in its supervisory reporting is shown below. It includes all Group companies in the banking and finance sector as well as real-estate companies in which BCV directly or indirectly holds the majority of voting rights or capital.

¹ The correspondence between the tables in this Pillar 3 report and those in the Basel II Accord is provided in the appendix (section 5.1).

Table 1: Group companies included in the supervisory review
at 31 December 2010, BCV Group

	Capital in millions	Control as %	Stake as %
Banking interests held by:			
Banque Cantonale Vaudoise			
Banque Piguet & Cie SA, Yverdon-les-Bains	CHF 20.0	85%	85%
Financial and real-estate companies held by:			
Banque Cantonale Vaudoise			
Gérifonds SA, Lausanne	CHF 2.9	100%	100%
Initiative Capital SA, Lausanne	CHF 1.7	100%	100%
Société pour la gestion de placements collectifs GEP SA, Lausanne	CHF 1.5	100%	100%
Unicable SA en liquidation, Prilly	CHF 20.0	100%	100%
Banque Cantonale Vaudoise and Gérifonds SA			
Gérifonds (Luxembourg) SA, Luxembourg	EUR 0.1	100%	100%

Companies taken into account for calculating capital requirements are the same as those included in the group consolidated accounts. All these companies are fully consolidated in the financial statements.

The Group does not have any companies that are accounted for using the equity method. The Group does not have any subsidiaries in the field of insurance.

There are no restrictions that could hinder the transfer of money or capital within the Group.

Table 2: Main non-consolidated holdings
at 31 December 2010, BCV Group

Aduno Holding SA, Zurich
Argant SA, Lausanne
Caleas SA, Zurich
Central mortgage-bond institution of Swiss cantonal banks SA, Zurich
Dynagest SA, Geneva
SIX Group SA, Zurich
Swiss Bankers Prepaid Services SA, Grosshöchstetten, Bern
Swisscanto Holding SA, Bern

The main non-consolidated holdings are listed in table 2. Their book value, amounting to CHF 87m, is deducted from the capital. The other holdings are risk-weighted (see section 4.5.2 below).

2. Capital structure

BCV Group's regulatory capital, the book value of which is determined in accordance with the Directives governing the preparation of financial statements (FINMA circular 2008/2), comprises core capital (Tier 1) and supplementary capital (Tier 2).

Tier 1 capital is composed of paid-in capital, disclosed reserves and minority interests. It is adjusted for such items as goodwill and regulatory deductions.

Tier 2 capital comprises: reserves on debt and equity securities carried under financial investments and stated at lower of cost or market, subject to a limit of 45% of unrealized gains; subordinated debt less amortizations; and regulatory deductions.

Regulatory deductions from Tier 1 and Tier 2 capital include non-consolidated holdings in financial-sector companies together with the amount of total expected loss as determined under the IRB approach that exceeds total value adjustments under Basel II.

At 31 December 2010, BCV's equity capital amounted to CHF 86,061,900 and comprised 8,606,190 fully paid-in registered shares with a par value of CHF 10.

BCV has no authorized or conditional capital, and has not issued any dividend-right certificates. There are no outstanding convertible bonds or options involving the BCV share issued by the Bank.

Table 3: Eligible capital
in CHF millions, BCV Group

	End 2010	End 2009
Gross Tier 1 capital	2,995	3,041
of which equity capital	86	172
of which disclosed reserves	2,894	2,855
of which minority interests	15	14
of which innovative instruments	-	-
Deductions from Tier 1 capital	-134	-89
of which regulatory deductions	-61	-44
of which other items (goodwill, holdings)	-73	-45
Eligible Tier 1 capital	2,861	2,951
Tier 2 and Tier 3 capital	33	64
Other deductions from Tier 2 and Tier 3 capital and from total capital	-33	-64
Total eligible capital	2,861	2,951

3. Capital adequacy

BCV monitors its capital adequacy in accordance with Pillars 1 and 2 of the Basel II Accord.

The FINMA capital adequacy ratio is a key part of the Pillar 1 capital-adequacy monitoring process.²

The Executive Board and the Board of Directors monitor the FINMA capital adequacy ratio and its components each quarter for the parent company and every six months for the Group as a whole. Important decisions regarding the Bank's business development and operations are analyzed in terms of their impact on the FINMA capital adequacy ratio. The impact that a worsening economic environment would have on the Bank's FINMA capital adequacy ratio is also analyzed each year using cyclicity stress tests (Basel II Accord, §435).

FINMA monitors the parent company's capital adequacy each quarter and the Group's capital adequacy every six months using the Common Reporting framework (COREP).

Pillar 2 capital-adequacy monitoring is carried out at two levels:

1. Regulatory requirements: BCV's FINMA capital adequacy ratio must remain above 120%, as is the case for the majority of Swiss banks at 31 December 2010. The additional capital buffer of 20% makes it possible to take into account specific elements that are not included in or are insufficiently covered by Pillar 1 (including interest-rate risk and concentration risk).
2. Stress testing (Basel II Accord, §434): The capital adequacy ratio must be high enough to absorb the stresses that the Bank calculates annually using extreme scenarios for business/strategic, credit, market and operational risks.

Barring significant changes in the economic and regulatory environment, the Bank aims to achieve a FINMA capital adequacy ratio for the Group of 145%, including 125% in Tier 1 capital. This amounts to a BIS Tier 1 capital ratio of 13%.

² The FINMA capital adequacy ratio is equal to the ratio of eligible capital to required capital after application of the multiplication factors specific to Swiss regulations. For a bank that applies the IRB approach, Swiss regulations require the following three multiplication factors to be applied:

- M: the institution-specific IRB multiplication factor (1.25 for BCV)
- m_{1a} : multiplication factor for credit exposures under SA-BIS (1.1)
- m_2 : multiplication factor for non-counterparty-related assets (3.0)

Table 4: Capital adequacy
in CHF millions, at 31 December, BCV Group

	BIS required capital		FINMA additional capital buffer ¹		FINMA required capital	
	2010	2009	2010	2009	2010	2009
Eligible capital	2,861	2,951	-	-	2,861	2,951
Tier 1 capital ²	2,861	2,951	-	-	2,861	2,951
Required regulatory capital	1,298	1,328	338	349	1,636	1,677
Credit risk	1,073	1,100	218	224	1,291	1,325
Non-counterparty-related assets	60	62	120	124	180	186
Market risk	31	28	-	-	31	28
Operational risk	134	138	-	-	134	138
BIS Tier 1² capital ratio	17.6%	17.8%				
BIS Total² capital ratio	17.6%	17.8%				
FINMA capital adequacy ratio					175%	176%
FINMA Tier 1 capital ratio					14.0%	14.1%
FINMA total capital ratio					14.0%	14.1%

¹ Impact of the multiplication factors specific to Swiss regulations

² Does not take into account the multiplication factors specific to Swiss regulations or transition thresholds

BCV's FINMA capital adequacy ratio remained stable, at a comfortable level of 175%. Barring any significant changes in the economic and regulatory environment, BCV intends to maintain the five-year dividend policy and equity-optimization strategy announced in 2008. This should bring the FINMA Tier 1 capital adequacy ratio down to 150% by 2014.

BCV's BIS Tier 1 capital ratio, which is calculated on the basis of Basel II capital requirements without taking into account the FINMA-specific multiplication factors and the transition thresholds, is 17.6%. The difference between the BIS Tier 1 capital ratio and the FINMA Tier 1 capital ratio (14.0%) reflects the additional capital buffer applied by FINMA (known as the "Swiss finish").

Table 5: Capital requirements for credit risk, by asset category
in CHF millions, at 31 December, BGV Group

Asset category	2010			2009		
	BIS	FINMA capital buffer	FINMA	BIS	FINMA capital buffer	FINMA
Residential retail	149	37	186	139	35	174
Other retail	51	11	62	53	11	63
Corporate	402	58	461	399	57	456
Specialized lending	335	84	419	354	88	442
Sovereigns	6	1	7	7	1	8
Other institutions	17	3	20	18	3	21
Banks	68	13	81	81	16	98
Equity	44	11	55	50	13	63
Total	1,073	218	1,291	1,100	224	1,325

In accordance with the Bank's business activities, the majority (around 80%) of the Bank's regulatory capital is associated with credit risk. Corporate lending (excluding banks) accounts for 68% of credit risk, due in particular to the large amount of specialized lending (e.g., trade finance and income-producing real estate).

Capital required for credit risk fell in 2010, mainly as a result of the reduced risk in trade-finance operations (impact of -CHF 29m) and the drop in interbank lending in favor of SNB bills (impact of -CHF 17m). This was partially offset by a rise in mortgage lending volumes (impact of +CHF 10m).

Table 6: Capital requirements for credit risk, by approach applied
in CHF millions, at 31 December, BCV Group

Asset category	International Standard Approach (SA-BIS)			IRB approach			Total		
	BIS	FINMA capital buffer	FINMA	BIS	FINMA capital buffer	FINMA	BIS	FINMA capital buffer	FINMA
Residential retail				149	37	186	149	37	186
Other retail	11	1	12	39	10	49	51	11	62
Corporate	281	28	309	121	30	152	402	58	461
Specialized lending	-	-	-	335	84	419	335	84	419
Sovereigns	6	1	7	-	-	-	6	1	7
Other institutions	7	1	8	10	2	12	17	3	20
Banks	27	3	30	41	10	52	68	13	81
Equity securities	-	-	-	44	11	55	44	11	55
Total	332	33	365	740	185	926	1,073	218	1,291

The International Standard Approach (SA-BIS) is applied to exposures representing 28% of regulatory capital for credit risk (outside the scope of the IRB approach). These exposures consist essentially of large-corporate exposure, for which a compatible IRB model is not yet in place.

4. Risk exposure and assessment

The strategic framework for risk exposure (risk appetite), risk-assessment principles, risk reporting, as well as other operational guidelines relating to risk management are defined in the Bank's Risk Management Policy and Strategy (RMPS), an internal framework document that is reviewed and approved each year by the Board of Directors.

This section of the report sets out the Bank's RMPS principles and provides details of its risk profile using the structure and tables required by FINMA for Pillar 3 disclosure.

4.1 Risk-management objectives and governance

Risk-management objectives

BCV manages all its risks in an integrated and consistent way, using a process that encompasses all of the Bank's activities. The overall goals are to:

- Ensure that BCV's exposure to the relevant risk factors is properly understood and evaluated;
- Ensure that BCV's actual risk level is in line with its available equity capital;
- Ensure that BCV optimizes the return on the risks that it takes.

Governance

All risks are managed according to the same basic principles of governance and organization. The main responsibilities can be summarized as follows:

- The Board of Directors establishes the Bank's policy for managing risk and decides the strategy the Bank will pursue in taking on risk.
- The Board of Directors' Audit & Risk Committee ensures that the risk management policy set by the Board of Directors is implemented and is operational.
- The Executive Board is responsible for ensuring that the risk-management procedures are implemented and operational, and for monitoring the Bank's risk profile. The Executive Board monitors strategic and business risk and supervises the Executive Board Risk Management Committee (EBRMC) in monitoring and reporting these risks. The EBRMC is chaired by the Chief Financial Officer (CFO), and includes the CEO, other division heads, and the Chief Risk Officer (CRO).
- Division heads are responsible for conducting and monitoring the activities of their divisions, regardless of whether the division has a front-line, steering or business-support role. They have initial responsibility for overseeing, identifying and managing the strategic, business, credit, market and operational risks arising from the activities of their divisions.
- The CRO is head of the Risk Management Department, which is part of the Bank's Finance & Risks Division. He develops risk-management principles and methods, monitors compliance with the aggregate risk limits (at the portfolio level) and is responsible for the Bank's risk reporting.
- The Chief Credit Officer (CCO) is responsible for analyzing risk for all types of credit-risk exposure assumed by the Bank and, up to the limit of his approval authority (see below), for credit decisions and for monitoring risk exposures on a counterparty basis. The CCO was part of the Corporate Banking Division up to year-end 2008. He became head of the new Credit Management Division in January 2009.

The Risk Management Department is the central pillar of the Bank's credit-, market- and operational-risk management. Its mission is to develop and continually improve the Bank's methods and principles for managing risk; to foster a culture of risk management among staff in all the Bank's divisions; to monitor the Bank's risk profile and risk-taking strategy; and to oversee and execute risk reporting. The Risk Management Department is also responsible for the overnight monitoring of market risk for BCV's trading floor.

4.2 Classification of risks and risk-assessment principles

Classification of risks

The Bank looks at three aspects for all types of risk:

- First, the existence of a risk factor, i.e., a source of uncertainty relative to the Bank's interests (e.g., the uncertain financial situation of one of the Bank's counterparties, or an equity position on the trading book with a fluctuating price);
- Second, the occurrence of a risk event, which is a situation that has an adverse effect on the Bank's interests and that is caused by the deterioration of a risk factor (e.g., if one of the Bank's counterparties does not meet its financial obligations, or if a share price falls);
- Third, the assessment of the negative impact that the risk event would have on the Bank's interests (e.g., the need to create a credit-risk provision or to record a loss on a security).

Throughout the Bank, four categories of risk are used to classify risk events:

- **Strategic/business risk.** Strategic risk arises from economic or regulatory changes that have an adverse effect on the Bank's strategic choices; business risk is the result of competitive changes that have an adverse effect on business decisions for a given strategy.
- **Credit risk.** This arises from the possibility that a counterparty may default. Credit risk exists before and during unwinding of a transaction.
- **Market risk.** This arises from potential adverse changes in market parameters, particularly the price of an underlying asset and its implied volatility. Market risk exists on the trading book and on the banking book (particularly in the form of interest-rate risk). Liquidity risk is included here.
- **Operational risk.** This arises from a possible inadequacy or failure relating to processes, people and/or information systems within and outside the Bank. Operational risk includes the risk of non-compliance, i.e., the risk of the Bank breaching legal requirements, standards and regulations.

For all risk types, the Bank seeks to protect itself against three types of potential impact:

- The financial impact, that is, a decrease in the Bank's net profit, the value of its capital and/or its market capitalization (i.e., a drop in the BCV share price);
- The regulatory impact, that is, inquiries, sanctions, increased monitoring or a restriction on banking activities;
- The reputational impact, that is, the image the Bank projects to the outside world.

Risk assessment

Throughout the Bank's businesses and portfolios and for every position and every operation, the Bank assesses and monitors its risk profile, i.e., its exposure to strategic, business, credit, market and operational risks. The Bank assesses the potential financial, regulatory and reputational impact of these risks.

Risk assessment generally involves analyzing the following:

- **Risk exposure**
This involves determining whether the Bank is exposed to certain risks as a result of its activities or operational processes.

- *Risk factors and events*
This involves identifying relevant risk factors and determining potential risk events. For strategic and business risk, this includes all economic and regulatory factors that may affect the Bank's business activities and its operational processes. For credit, market and operational risk, the relevant risk factors and risk events are defined according to the nature of the Bank's activities.
- *Impact of risks*
This involves determining the potential financial, regulatory and reputational impact. For risks with a potential financial impact, this means defining *loss metrics* and *risk metrics* and determining *capital requirements*.

Loss metrics, which are used to determine the potential financial impact, are calculated in accordance with the guidelines set out in the RMPS; they are developed for each risk category set out above. Generally speaking, the Bank uses effective loss, expected loss and accounting loss to measure loss. Which risk metrics are applied depends on the relevant risk factors and the risk categories in question. These metrics reflect the methods and tools currently available to the Bank. The Bank continually improves and implements the risk metrics to make them more integrated and consistent among the Bank's various activities and risk categories. In terms of *capital requirements*, the Bank monitors its capital situation in accordance with the FINMA framework.

4.3 Credit risk

Strategy and processes

Guidelines for taking on credit risk

The Bank's lending activities are focused on Vaud Canton; lending does however take place to a lesser extent in other parts of Switzerland and other countries for specific client segments and products. Through its lending activities, the Bank aims to contribute to the development of all areas of the private-sector economy, to mortgage lending and to the financing of public-sector entities within the Canton.

Lending at BCV is based on the principle that a borrower must be able to fully repay any loan within a given period, or that the Bank may be released from any commitments it may have in regard to counterparties, while receiving fair compensation for the risks incurred and the work undertaken.

The Bank applies a differentiated pricing policy according to the estimated degree of risk. Where preferential terms are requested due to the extent of the Bank's business relationship with the counterparty or business group, the overall return on the business relationship is taken into consideration.

The Bank does not engage in pledge financing or name lending. The lending decision takes into account the solvency of the counterparty, the project's earnings capacity and the management's abilities; these factors take precedence over collateral value or reputation.

The Bank avoids financing or supporting illegal or immoral activities through its lending facilities. The Bank also avoids facilitating, through its lending facilities, activities that could entail a risk of money laundering, insider trading, corruption, or activities that would breach in any other way the Swiss banks' code of conduct with regard to the exercise of due diligence. The Bank avoids operations that may damage its reputation or image.

Standards and procedures for lending and loan renewals

Before taking on credit risk, the Bank conducts an analysis of the nature and complexity of lending commitments, using the appropriate internal methods for that type of transaction. BCV will not grant, increase or renew loans to debtors until it has assessed solvency, i.e., until it has determined the appropriate internal counterparty default rating using established methods. Risks relating to transactions and the return on commitments are also analyzed. It is in this context that the collateral for the commitment is identified and evaluated.

For both new and existing lending operations, the Bank studies the economic background, the nature of and the reasons for the operation, as well as the relationship between the parties involved. The Bank seeks to obtain a detailed view of the economic and personal situation of counterparties, and, as necessary, of the beneficial owners, the guarantors or the beneficiaries of guarantees. The information obtained is carefully verified.

Standard lending operations are carried out using models and/or guidelines that have been validated by the Bank's legal department. For some lending operations, the Bank's legal department or, if necessary, external experts may be called upon. Contractual provisions ensure, in particular, that the funds are used in accordance with the stated purpose of the lending facility and that the Bank obtains any requested financial information within the stated deadlines. For medium- and long-term lending commitments, the contract is written in such a way as to ensure that the Bank's position as lender is not subordinated to that of other creditors without its agreement, in terms of both collateral and the counterparty's position within a business group. For long-term commitments that cannot be terminated at any time based on the Bank's General Conditions, or for which the Bank cannot call in additional collateral at any time, the Bank adds a termination clause to hedge against the increased risk.

An application is prepared for all new loans and loan renewals. The application clearly states the reasons, conditions and contractual terms associated with the risk taken, and in particular the credit limit granted to the counterparty or business group. These applications are submitted for approval to the competent body according to a defined delegation chain.

Reexamination of lending commitments and collateral

Lending commitments are periodically reviewed in an effort to assess any change in the counterparty's solvency or the value of the collateral, and to determine whether the commitments should be maintained at the existing level or reduced. The Bank uses an internal timetable to ensure that a periodic review is conducted of all lending commitments associated with a business group together with the contractual terms. A similar timetable is also used to review the level of collateral.

In addition to these regular reviews, the Bank uses a system of alerts under which specific commitments are reviewed outside of the normal timetable if any deterioration is detected. These alerts could be triggered and a review required, for example, if payment deadlines are missed or if there is a delay in the submission of information required to properly monitor lending commitments.

Decisions made on the basis of these reviews are subject to the same delegation chain that is used to assess whether to grant a new line of credit.

Limits, portfolio monitoring and special measures

Within the credit portfolio, global risk limits are defined, mainly for the purpose of tallying up exposures that taken together could have a major impact on the Bank's net profit and economic capital. These limits are defined and monitored:

- For the nominal exposure, the expected loss and the regulatory capital requirement for various client segments and for activities outside Vaud Canton and outside Switzerland.
- For the amount and term of the lending commitments in each foreign country in which the Bank takes on credit risk. The limits are determined through an internal analysis of the financial and settlement risks associated with the financing in place in the various countries.
- For the nominal amount of aggregate positions for a given business group, in order to monitor concentration risk.

If necessary, in addition to setting and monitoring these limits, the Bank analyzes specific portfolios that are deemed to be exposed to potential or actual adverse conditions. These analyses may lead to

proactive measures for a sub-grouping of the counterparties in question in order to enhance credit-risk monitoring.

Furthermore, in case of extraordinary events such as a significant decline in the local or broader property market, the dates on which collateral is reviewed may be moved forward for groups of collateral identified in accordance with various criteria (by region, property type, age of existing valuation, etc.) to avoid a situation in which the Bank's information systems contain obsolete and overestimated amounts for the market value of properties.

Monitoring and treating impaired lending commitments

Lending commitments to counterparties that present a particularly high risk of default but are nevertheless considered to be performing, along with lending commitments to counterparties in default, are said to be impaired. These counterparties are subject to closer monitoring.

Lending commitments to counterparties “reputed to be in financial difficulty” (RD) or “in default” (ID) – for an explanation of these terms see the section below on risk assessment – are treated by the Bank individually, quickly and with the necessary rigor, in accordance with ethical and compliance-related rules. These positions must generally be resolved over the course of three to four years. Where this strategy cannot be applied, the Bank takes the appropriate measures to minimize its losses.

Structure and organization

Responsibilities in the credit process

In processing credit operations, the Bank as a general rule separates its client-facing divisions (Corporate Banking, Retail Banking, Private Banking and Asset Management & Trading), which are responsible for advising, selling, selecting, pre-analyzing and pricing the transactions, from the Credit Management Division, whose departments are in charge of the other phases of the lending process such as analysis, granting loans, arranging the financing and monitoring credit limits. In addition to the principle of separation, rules exist to avoid potential conflicts of interest between counterparties on one hand and analysts and specialists on the other.

Delegation chain for credit-related decisions

The decision-making process involves approving or reviewing a position and validating the internal counterparty default rating as well as any overrides. To determine the competent body, the Bank applies a differentiated delegation chain that ensures that large and high-risk commitments are dealt with at the highest level, guaranteeing that Management is appropriately involved in taking on credit risk.

The competent body depends on the nature of the commitments and the level of credit risk of the business group to which the counterparty belongs. Decision-making authority is attributed individually or to credit committees, in accordance with a set of approval limits for each type of commitment (e.g., loans and advances to customers, interbank lending, and loans to employees and members of the governing bodies). These limits depend on the internal counterparty default rating, the nature, amount and term of the lending commitment, and the level and quality of the collateral for the financing. For each type of lending commitment, there is a distinct set of approval limits for decisions relating to short-term overruns or overdrafts.

The Board of Directors is at the top of the decision-making hierarchy and systematically reviews the most important credit-related decisions. Immediately below the Board of Directors are the Executive Board's Credit Committee (EBCC) and the Chief Credit Officer (CCO), who heads the Credit Management Division. The EBCC and the CCO have widespread lending authority, which encompasses all of the Bank's activities. For lower amounts, lending authority is allocated according to the activity, beginning with the sector-specific credit committees. Lower down still, the analysts in the Credit Management Division, with different levels of authority, have certain powers that are specific to their field. Finally, the front line has some lending authority. It is limited to fully secured lending commitments in a limited amount, temporary overdrafts or overruns, and certain employee loans.

Lending commitments to counterparties “reputed to be in financial difficulty” (RD) or “in default” (ID) are subject to a separate delegation chain. There is an additional set of approval limits for decisions relating to taking on credit risk abroad.

Decisions taken at a given approval level are checked *a posteriori* by the level above, through a full or selective review of lending decisions deemed to be significant.

Responsibility for identifying and monitoring impaired loans

Any entity within the Bank that is involved in the lending process may suggest that a client be included in the categories “reputed to be in financial difficulty” (RD) or “in default” (ID) on the basis of criteria that are defined in the same way for all of the Bank’s activities. Entities with lending authority are authorized to decide whether to include a client in these categories.

A specialized department within the Credit Management Division monitors these commitments. It is separate from the front-line units that generate lending commitments. Once lending commitments are sound again, they are monitored by the front line.

Internal documentation and regulations

The guidelines for lending activities are set out in the Bank’s Credit Policy. In particular, it sets out the basic principle for how authority for granting and reviewing loans is allocated. The delegation chain is then explained in detail in the Bank’s Lending Policy Rule Book. Together with the Technical Standards (technical criteria and limits for lending), these documents form the framework for the Bank’s lending activities, which is established in accordance with the Bank’s Risk Management Policy and Strategy.

The Executive Board defines and develops the Credit Policy, upon the recommendation of the CCO, and submits it to the Board of Directors (BoD) for approval. The BoD reviews the Credit Policy periodically. All those involved in the lending process are responsible for monitoring the Credit Policy and ensuring that it is adhered to. The CCO oversees its application.

The Lending Policy Rule Book sets out the rules and guidelines for decisions concerning the Bank’s credit risk at the parent company level (delegation chain). It is established in accordance with the Bank’s by-laws and Credit Policy.

The EBCC develops and submits the Lending Policy Rule Book and its updates to the BoD.

The Technical Standards define the type of collateral recognized by the Bank and, for each type of collateral, the loan-to-value ratio required for a loan to be considered secured. The Technical Standards are subject to validation by the BoD.

At the operational level, lending activities are structured around a series of internal directives that provide details of the guidelines set forth in the framework documents.

Risk assessment

Risk event

A credit-risk event is a default by a counterparty: the Bank considers a counterparty to be in default when the counterparty is past due more than 90 days on any material credit obligation to the Bank or when the Bank considers that the counterparty is unlikely to pay its credit obligations to the Bank in full.

Risk exposure

The Bank considers all credit-risk exposures that arise from its activities, including its activities as a custodian bank, with the following counterparties or groups of counterparties:

- Retail and private banking clients;
- Corporates, excluding trade finance;

- Trade finance
- Fund-management companies;
- Public-sector entities (municipalities, and regional, local and national governments);
- Bank counterparties.

For any counterparty, exposure to credit risk on the trading book and banking book (both on and off the balance sheet) occurs in the following forms:

- Exposure in the form of a financial claim (mortgage loans, fixed-term advances, current accounts with credit limits, overdrafts, investments and current accounts held by the Bank with other banks);
- Off-balance-sheet exposure resulting from undrawn portions of notified limits, conditional commitments (guarantees) issued by the Bank on behalf of the counterparty, guarantees or other forms of commitment (letters of credit, avalized drafts) received from the counterparty as collateral or for which the Bank takes over the risk;
- Exposure resulting from forward contracts and OTC derivatives, taking into account netting agreements and collateral management agreements;
- Exposure in terms of shares and other equity securities (including equity derivatives) for which the counterparty is the issuer (on the banking book and net positions on the banking book);
- Exposure resulting from repos/reverse repos and securities lending/borrowing transactions;
- Settlement exposure, especially on currency transactions. It should be noted that when positions are unwound through a simultaneous settlement system, such as CLS (Continuous Linked Settlement), settlement risk is not considered.

The methods defined determine the amount of exposure by category.

Loss metrics

The Bank uses two different loss metrics:

- *Expected loss*: The expected loss is determined on the basis of the probability of default and the loss given default for positions not relating to trade finance, and on the basis of slotting criteria for trade-finance positions. A general description of these methods is provided below.
- *Book loss or need for new provisions*. Most credit-risk provisions are the result of a bottom-up calculation, position by position, following the discovery of RD and ID counterparties and an analysis of their exposure. These provisions reflect the best *a priori* estimate of the loss on specific exposures. The amount of provisions is generally determined using a parameter-based method in which the provisioning ratio is determined and applied to credit-risk exposure. This method is different from that used to calculate the expected loss for non-impaired positions. In some cases, for large commitments or for special or complex situations, the amount of the provision is based on scenario analysis. The Bank also allocates provisions for country risks, which are created whenever there is major credit risk on non-impaired commitments for reasons relating to adverse situations in a country associated with the commitment.

For performing loans not relating to trade finance, the expected loss is determined on the basis of the probability of default and the loss given default.

- *A counterparty's probability of default and rating default risk*

Each counterparty is assigned an internal counterparty default rating depending on its probability of default. Throughout the Bank (parent company), there are seven main internal ratings (B1 to B7) and 17 sub-ratings (B1.1 to B7).

The ratings B1 to B5.2 are used for non-impaired counterparties; B5.3 and B6 are used for counterparties "reputed to be in financial difficulty" (RD), which are performing but impaired (probability of default below 100%). Counterparties rated B7 are "in default" (ID) or "non-

performing." Provisions for credit risk may be formed for ID counterparties and for counterparties rated B5.3 and B6, i.e., "reputed to be in financial difficulty."

A default rating method is used to assign an internal rating to each non-impaired counterparty. Counterparties (individuals, companies, banks, etc.) are distinguished by factors that may affect their solvency, the nature of available explanatory data and the level of loss-risk they represent. Rating methods are segmented into groups of counterparties so that counterparties that are deemed similar according to these analytical factors are handled the same way.

For each rating segment the default rating method for non-impaired clients comprises a "score" and an "analyst's assessment." Considered together, the score and the analyst's assessment make up the method used to assign an internal rating to each non-impaired counterparty.

- For the score component of the rating method, an internal rating is identified using one of the following three procedures: applying a calculation function for the probability of default calibrated statistically or based on an expert's assessment, assigning the counterparty to a default probability slot, or transferring a counterparty from one rating to another in accordance with a system of rules. The Bank also employs standards and methods to recognize the impact on the probability of default of factors such as the business group, or the support of local, regional or national governments.
- The "analyst's assessment" component of the rating method defines the guidelines to be followed by an expert when analyzing the counterparty's debt quality, alongside the score. The competent body sets and approves the internal rating that is eventually determined as well as the override, if necessary.

Specific criteria are defined for the purpose of identifying counterparties reputed to be in financial difficulty (RD). A counterparty is deemed RD when one of the following two conditions is met:

- The Bank believes there to be a high risk that part of its exposure to credit risk on the counterparty will not be recovered.
 - A significant breach of the contract on any of the forms of credit extended to the counterparty by the Bank has occurred and has not been remedied without a temporary or definitive exemption being granted.
- *Loss given default*

To calculate the loss given default, the Bank takes into account the expected exposure at the time of default, the expected coverage ratio at the time of default, the nature of the collateral, and the rate of loss on secured and unsecured parts. The internal models used are calibrated so that the loss given default produced by the calibrated model corresponds to an effective loss that takes into account discounted values of all cash flows paid and collected by the Bank after the default, including fees associated with managing the loans of counterparties in default and with recovering loans.

A risk-management slot is allocated to performing loans relating to trade finance in order to estimate the expected loss. The slot assignment is based on a structured analysis of the counterparty (i.e., the sponsor) and of the transaction. It meets the supervisory slotting criteria for specialized lending in annex 4 of the International Convergence of Capital Measurement and Capital Standards: a Revised Framework (Basel II Accord).

Risk metrics

The Bank's main credit-risk metrics are:

- The expected loss (see above);
- Loss under stress scenarios. The Bank applies cyclicity stress tests and global stress tests:
 - Cyclicity stress tests for credit risk indicate the extent of the change in capital requirements in the event of an economic slowdown. They are based on changes in two key credit-risk variables, which are probability of default and loss given default.

- Global stress tests for credit risk are part of the Bank's broad approach of estimating the impact of particularly unfavorable risk events on the Bank's net profit in order to assess capital adequacy. For credit risk, this involves estimating the need for new provisions in the event a stress scenario occurs. The stress scenarios are defined for the entire lending portfolio, as well as for the various sub-portfolios, on the basis of historical observations (for example, the property market correction in the early 1990s) and macroeconomic analyses.

Unless otherwise indicated, credit-risk metrics address a risk horizon of 12 months.

Capital requirements for credit risk

For a large proportion of credit-risk exposures, the Bank determines its regulatory capital requirements (Pillar 1) using the Internal Ratings-Based Foundation approach (IRB-F). For exposures outside the scope of the IRB-F approach, capital requirements are determined using the International Standard Approach (SA-BIS).

Risk reduction

For inter-bank activities, the Bank applies the following risk-reduction measures in particular:

- Insofar as the counterparty is a member/third-party participant of CLS (Continuous Linked Settlement), the Bank takes the necessary steps to ensure that the unwinding of transactions can take place through CLS.
- In principle, the Bank handles OTC derivative transactions only on the basis of ISDA netting agreements or an equivalent agreement.
- For its main bank counterparties in terms of pre-settlement exposure, the Bank takes the necessary measures so that OTC derivative transactions can be carried out in accordance with a credit support annex (CSA) for collateral management. Alternatively, blocked cash deposits can be set up as a risk mitigant for OTC derivative exposure.

For customer lending activities, the Bank seeks to appropriately secure exposures through the use of collateral.

Various types of collateral are recognized. They include:

- Pledges on real estate (primarily mortgage deeds on various types of real estate);
- Pledges on financial assets (mainly cash and securities accounts);
- Guarantees (mainly loan guarantees and bank guarantees).

The valuation of collateral recognized by the Bank is based on the principle of market value, and is carried out as often as appropriate for the type of collateral. Pledges on real estate and financial assets are valued as follows:

- The valuation of pledged real estate is carried out using methods appropriate to the type of real estate: models are used for standard real estate like houses and apartments, while other types of properties, like hotels, are appraised. The frequency at which real estate is valued depends on the type of property, as do the standard loan-to-value ratios for the loans secured by this collateral.
- Securities portfolios and other financial assets pledged as collateral for lombard loans are valued daily. Loan-to-value ratios are defined by type (shares, debt securities, fund units, fiduciary accounts, precious metals, structured products), country of domicile, currency risk, the liquidity of the security, the counterparty's default risk and the residual term for debt securities, together with portfolio diversification.

Table 7: Credit-risk exposure by type of exposure and region
in CHF millions, BCV Group³

Region	Situation at 31 December 2010						Total	Total at 31/12/09
	On-balance-sheet loans and advances	Guarantees issued by the Bank	Undrawn credit limits	OTC derivatives	Debt securities	Total		
Vaud Canton	20,175	272	3,289	129	6	23,871	22,800	
Rest of Switzerland	4,701	386	1,817	523	4,095	11,521	9,770	
European Union	2,319	88	129	466	576	3,577	4,930	
Rest of world	1,303	732	47	10	2	2,094	2,131	
Unattributed	247	123	-	1	-	371	349	
Total	28,744	1,601	5,281	1,128	4,679	41,433	39,981	

The majority of client and bank exposures are found in Vaud Canton (58%).⁴ This type of exposure is composed primarily of lending volumes on the balance sheet including mortgage loans and various financing in the form of current accounts (e.g., loans for construction, operational, investment or cash-management purposes).

Exposures in the rest of Switzerland (excluding Vaud Canton), which amount to 28% of total exposures, comprise mainly large-corporate financing, often in the form of syndicated loans, and SNB bills. Exposures in the European Union arise mainly from cash-management and trading operations, whereas exposures in the rest of the world are a result of trade-finance activities.

³ Excluding securities borrowing and lending operations corresponding to a net exposure of CHF 468m after regulatory haircuts.

⁴ Unless otherwise stated, exposures are measured as follows in this section:

- On-balance-sheet loans and advances, and guarantees issued by the Bank: amounts drawn down plus interest and fees due
- Undrawn credit limits: difference between the amount of the limit and the amount drawn down
- OTC derivatives: replacement value plus regulatory add-on after netting and collateral management agreements have been taken into account
- Debt securities: balance-sheet value

Table 8: Credit-risk exposure by type of counterparty
in CHF millions, BCV Group⁵

Situation at 31 December 2010							
Type of counterparty	On-balance-sheet loans and advances	Guarantees issued by the Bank	Undrawn credit limits	OTC derivatives	Debt securities	Total	Total at 31/12/09
Retail	7,576	11	179	0	-	7,766	7,205
Private banking	5,289	21	356	8	-	5,674	4,959
SMEs	3,746	196	944	37	4	4,927	4,743
Real-estate professionals	4,607	9	536	0	-	5,151	4,935
Large corporates	2,367	252	2,277	110	24	5,029	4,979
Public-sector entities	703	3	989	26	657	2,378	2,441
Trade finance	1,324	657	-	7	-	1,987	2,143
Banks	3,134	453	-	941	3,994	8,521	8,575
Total	28,744	1,601	5,281	1,128	4,679	41,433	39,981

The Bank distinguishes among eight types of counterparty depending on their legal status, the client's main activity and the intensity of the business relationship.⁶

A large proportion of the Bank's exposures (32%) represents lending to retail and private banking clients in the form of mortgages and lombard loans.

Companies account for 41% of exposures, which is divided among SMEs, real-estate professionals, large corporates and trade-finance counterparties.

Public-sector exposures mainly consist of limits granted to the Swiss government, to municipalities and to the Vaud Cantonal Government. Around CHF 580m of exposures to public-sector entities is composed of debt securities issued by the Swiss Government, other Swiss cantonal governments and other national governments.

Exposures to bank counterparties represented 21% of total exposures at 31 December 2010. Debt securities issued by banks include SNB bills amounting to CHF 1.9bn.

⁵ Excluding securities borrowing and lending operations corresponding to a net exposure of CHF 468m after regulatory haircuts.

⁶ The counterparty types are described in the annex in section 5.2.

Table 9: Breakdown of exposures by residual contractual maturity
in CHF millions, BCV Group⁷

Situation at 31 December 2010							
Maturity	On-balance-sheet loans and advances	Guarantees issued by the Bank	Undrawn credit limits	OTC derivatives	Debt securities	Total	Total at 31/12/09
Parent company	28,220	1,480	5,281	1,128	4,679	40,788	39,474
No maturity	22,039	-	2,921	-	-	24,960	24,095
Less than 1 year	5,108	1,203	1,644	847	2,415	11,216	10,906
1 to 5 years	696	69	521	167	1,512	2,967	3,214
More than 5 years	377	207	195	115	751	1,645	1,258
Subsidiaries	524	121	-	-	-	645	507
Group total	28,744	1,601	5,281	1,128	4,679	41,433	39,981

For a large proportion (around 60%) of the Bank's exposures, there is no contractual maturity for repayment. This is the case for all mortgage loans and for some credit limits. Most mortgage loans are currently fixed-rate loans, which means there are maturity dates on which the interest rate can be renewed. At the maturity dates, most fixed-rate loans are renewed with new interest rates. For tax reasons, it is rare for clients residing in Switzerland to fully pay down their mortgage loan.

Off-balance-sheet commitments and OTC derivatives mostly have a maturity of less than one year. Debt securities are either SNB bills, which are used to manage liquidity and have a maturity of less than one year, or financial investments with maturities of between one and five years.

⁷ Excluding securities borrowing and lending operations corresponding to a net exposure of CHF 468m after regulatory haircuts

Table 10: Provisions
in CHF millions, at 31 December, BCV Group⁸

Type of counterparty	Total impaired lending commitments		Specific provisions		Provisions for country risk	
	2010	2009	2010	2009	2010	2009
Parent company	602	668	218	282	0	2
SMEs	287	275	102	106	0	0
Retail	66	79	16	31	0	0
Real-estate professionals	25	80	1	30	0	0
Trade finance	114	96	49	47	0	2
Private banking	36	49	10	17	0	0
Banks	20	30	12	15	0	0
Large corporates	54	60	27	36	0	0
Subsidiaries	8	15	4	6	0	0
Total	610	683	222	288	0	2

Impaired loans amounted to CHF 610m and accounted for 1.7% of credit limits. A provision of CHF 222m exists for these loans; this represents an average provisioning ratio of 36%. The need for specific provisions is determined individually for each impaired loan, taking into account the liquidation value of collateral and the characteristics of the counterparty. Provisions for country risk cover non-impaired exposures in countries where the financial or settlement risk rating is below a given threshold. At year-end, there were no provisions for country risk, as all provisions had been released during the year.

⁸ Total lending commitments, with the exception of OTC derivatives, are measured in accordance with the definition provided in footnote 4. For OTC derivatives, the exposure is equal to the replacement value plus the add-on calculated using the internal method.

Table 11: Charge-offs and change in provisions
in CHF millions, at 31 December, BCV Group⁹

Type of contreparty	Change in provisions		Charge-offs ¹	
	2010	2009	2010	2009
Parent company	-66	-85	-21	21
SMEs	-4	-52	-13	-10
Retail	-15	-17	-5	-8
Real-estate professionals	-29	-24	-5	-3
Trade finance	+0	-3	+3	+31
Private banking	-7	-1	-4	-2
Banks	-2	-1	-0	-2
Large corporates	-9	+13	+3	+13
Subsidiaries	-2	+1	-2	+1
Total	-68	-84	-23	21

¹ Excluding recoveries of CHF 9.4m in 2010 and CHF 11m in 2009

In 2010, provisions fell by CHF 68m, mainly as a result of the use of provisions for large corporates and SMEs (see table 13 as well). The decrease in provisions for real-estate professionals was due to the reclassification of certain counterparties as SMEs. In terms of the impact on the income statement, there was a release of provisions (CHF 23m), primarily as a result of improved prospects of recovery for certain major counterparties. Furthermore, the difficult economic climate in 2009 and the beginning of 2010 only had a slight impact on other types of counterparties, testifying to the high quality of the Bank's loan book.

⁹ Total lending commitments, with the exception of OTC derivatives, are measured in accordance with the definition provided in footnote 4. For OTC derivatives, the exposure is equal to the replacement value plus the add-on calculated using the internal method.

Table 12: Impaired loans by region
in CHF millions, at 31 December 2010, BCV Group

Region	Impaired lending commitments	Specific provisions	Provisions for country risk
Parent company	602	218	-
Vaud Canton	388	126	
Rest of Switzerland	81	31	
European Union and North America	44	30	
Rest of world	85	29	-
Unattributed	4	2	
Subsidiaries	8	4	-
Total	610	222	-

64% of impaired loans are linked to exposures in Vaud Canton and 78% to exposures in Switzerland as a whole.

Table 13: Change in credit-risk provisions
in CHF millions, BCV Group

	Specific provisions	Provisions for country risk	Total
Amount at end-2009	288	2	290
Used provisions	-54	0	-54
New overdue interest and recoveries	19		19
New provisions charged to the income statement	40	0	40
Releases of provisions to income statement	-71	-2	-73
Amount at end-2010	222	0	222

In 2010, provisions fell by CHF 68m to CHF 222m at 31 December 2010.

Provision releases amounted to CHF 71m, primarily as a result of improved prospects of recovery for certain counterparties. Used provisions stood at CHF 54m after major credit facilities were closed out.

Table 14: Exposure by approach applied
in CHF millions, at 31 December 2010, BCV Group¹⁰

	SA-BIS		IRB		Total	
	Drawn	Undrawn	Drawn	Undrawn	Drawn	Undrawn
Residential retail	274	-	13,213	-	13,487	-
Other retail	46	-	1,218	-	1,264	-
Corporates	4,514	2,081	2,795	596	7,309	2,677
Specialized lending	-	-	6,369	425	6,369	425
Sovereigns	2,660	24	-	-	2,660	24
Other institutions	404	350	717	819	1,121	1,169
Banks	624	-	4,306	-	4,929	-
Total	8,521	2,455	28,617	1,840	37,138	4,295

For a large proportion (74%) of the Bank's lending exposures, the capital requirement is determined using the IRB-F approach. The other exposures are outside the scope of this approach and are determined using the International Standard Approach (SA-BIS). Two main types of exposure are outside the scope of the IRB-F approach:

- Firstly, counterparties for which the Bank does not intend to put in place a rating model are outside the scope of the IRB-F approach. These counterparties include the Swiss Government, Swiss cantonal governments, the mortgage-bond bank, the central mortgage-bond institution, counterparties with no loan agreement (i.e., for overdrafts) as well as exposures at the Bank's subsidiaries.
- Secondly, counterparties for which the Bank uses an internal rating model that does not yet meet the IRB requirements are outside the scope. This refers in particular to large corporates.

¹⁰ Excluding securities borrowing and lending operations corresponding to a net exposure of CHF 468m after regulatory haircuts.

4.3.1 The Standard Approach and the IRB approach for specialized lending

International Standard Approach (SA-BIS)

FINMA defines the risk weightings to be applied for exposures treated using the SA-BIS by type of counterparty (Capital Adequacy Ordinance, appendix 3). In this case, FINMA authorizes the use of external ratings (CAO, article 50) provided that:

1. The ratings are supplied by ratings agencies recognized by FINMA;
2. External ratings are applied systematically by the Bank using a precise and specific approach;
3. Where the Bank uses external ratings to determine the risk weightings for a category of positions, the entire category must in principle be weighted through the use of external ratings.

Currently, the Bank opts not to use external ratings to determine the risk weightings of counterparties for which the SA-BIS is used. Consequently, a weighting of 100% ("no rating") is used for these counterparties.

Table 15: Portfolio subject to the International Standard Approach (SA-BIS)
in CHF millions, at 31 December 2010, BCV Group¹¹

Risk weighting	Retail banking clients		Corporate clients		Sovereigns, central banks and other institutions		Banks		Total	
	Total lending commitments	Commitments less collateral	Total lending commitments	Commitments less collateral	Total lending commitments	Commitments less collateral	Total lending commitments	Commitments less collateral	Total lending commitments	Commitments less collateral
0%	14	14	7	7	2,584	2,584	-	-	2,605	2,605
20%	-	-	1,452	1,452	377	377	207	207	2,037	2,037
35%	180	180	183	183	-	-	-	-	363	363
50%	0	0	-	-	25	25	1	1	26	26
75%	61	51	-	-	-	-	-	-	61	51
100%	60	44	3,234	3,152	76	76	295	295	3,666	3,568
150%	-	-	3	1	-	-	-	-	3	1
Total	315	290	4,880	4,795	3,063	3,063	503	503	8,761	8,651

Corporate clients make up 56% of the portfolio that is subject to the SA-BIS. This category includes large corporates for which a compatible IRB default rating model is not yet in operation (weighting = 100%), and bonds from the central mortgage-bond institution and the mortgage-bond bank (weighting = 20%). The category "Sovereigns, central banks and other institutions" is composed primarily of exposure to the Swiss National Bank (weighting = 0%), the Swiss government (weighting = 0%) and several Swiss cantonal governments (weighting = 35%).

¹¹ Commitments represent exposures after the CCF is applied and the substitution effect is taken into account.

Slotting approach for specialized lending

The Bank uses slotting criteria for the financing of real-estate professionals (“income-producing real estate”) and trade-finance transactions (“commodities finance”). For these two categories, FINMA has authorized the Bank to assign preferential risk weights to “strong” and “good” exposures (Basel II Accord, §277).

For real-estate professionals, the slots are determined on the basis of PD, LGD and EAD models that are internally applied to each credit exposure the real-estate professionals category. A specific mechanism used to calculate capital requirements has been set up to determine the PD of real-estate professionals in order to reduce the sensitivity of regulatory capital to the business cycle.

For trade finance, the slotting is based on a structured analysis of the counterparty (i.e., the sponsor) and of the transaction. It meets the supervisory slotting criteria for specialized lending in annex 4 of the International Convergence of Capital Measurement and Capital Standards: a Revised Framework (Basel II Accord).

Table 16: Portfolios subject to the slotting method under the IRB approach
in CHF millions, at 31 December, BCV Group¹²

Slot	Total		Income-producing real estate		Commodities financing	
	2010	2009	2010	2009	2010	2009
Strong	3,333	2,904	2,399	2,119	934	785
Good	2,479	2,661	1,794	1,935	685	726
Satisfactory	440	726	180	191	260	535
Weak	2	0	2	0	-	-
Defaulted	108	96	-	-	108	96
Total	6,362	6,387	4,376	4,245	1,987	2,143

An overwhelming proportion (96%) of real-estate exposure can be found in the strong and good slots. This underscores the fact that this exposure is mainly associated with financing for real-estate investors that is for the most part secured by properties.

Similarly, 81% of trade-finance transactions are in the strong and good slots, as they are secured by recognized collateral (especially cash and merchandise). Exposures in the satisfactory and good slots have dropped, while those in the strong slot have risen, reflecting the reduced risk in trade-finance activities.

¹² Commitments represent exposures after application of the CCF.

4.3.2 IRB approach (excluding specialized lending)

BCV obtained approval from FINMA to use the Basel II IRB Foundation approach (IRB-F) to determine regulatory capital requirements for credit risk beginning on 1 January 2009.

Structure of IRB rating systems

The rating system for default risk is composed of a series of rating models. In all cases, the aim is to assess the one-year probability of default, in the form of an internal counterparty default rating. The following models are used for the categories for which the Bank obtained IRB-F approval (they are named for the population to which they apply):

- Individuals (statistical score);
- BCV staff (default probability pool);
- Private banking (default probability pool);
- SMEs (several statistical scores, depending on the nature of the client);
- Municipalities in Vaud Canton (expert-based scores);
- Real-estate professionals (several expert-based scores, depending on the nature of the client);
- Banks (statistical score, integrated into a global analytical approach);
- Joint and several co-debtors (approach based on the transfer of the internal counterparty default rating).

The Bank has also defined and implemented a system of rules governing the transmission of internal ratings for other types of counterparties that are related in terms of credit risk. The scores are accompanied by the analyst assessment rules.

All these models, with the exception of the rating model for bank counterparties, generate an estimate of the probability of default without using external ratings. When assessing default risk, the rating model used for bank counterparties takes into account, among other factors, the ratings issued by the main ratings agencies (Moody's, Fitch and Standard & Poor's).

Internal LGD and EAD models are used to calculate regulatory capital requirements for retail portfolios.

Use of ratings

In addition to being used to calculate regulatory capital requirements under the IRB approach, internal ratings are used for numerous purposes (in the front, middle and back offices). Here are the main uses:

- Decision-making support when credit facilities and other commitments are granted or renewed;
- Defining lending authority and the intensity of monitoring;
- Setting risk-adjusted prices;
- Creating provisions;
- Monitoring the performance of business units;
- Analyzing risk on the lending book;
- Strategic planning.

The scope of application of certain models for internal needs goes significantly beyond the scope of the corresponding IRB approval. Internal LGD/EAD models are used to estimate the expected loss on most of the Bank's credit portfolios and not only on the retail portfolios. Furthermore, internal rating models for default risk are used for a number of portfolios for which the Bank has not obtained IRB-F approval, such as large corporates.

Managing and integrating the reduction in credit risk

The principles used to recognize and value collateral are the same for the portfolios for which BCV has obtained IRB-F approval for calculating regulatory capital requirements as for the rest of its lending portfolio.

Rating system's control mechanism

The rating system's control mechanism obeys the principles of the Bank's internal control system. It is composed of three levels of internal oversight. The first two levels are under the responsibility of the Executive Board, while the third level falls under the Board of Directors:

- Level 1: operational and managerial oversight of business activities, in accordance with the chain of command.
- Level 2: monitoring the appropriateness and effectiveness of level 1 by independent entities.
- Level 3: periodic independent review of levels 1 and 2 by the Internal Audit Department.

For the rating models (PD, LGD and EAD), or other models affecting the assessment of credit risk, three steps are defined. The objectives and responsibilities by step are as follows:

Step 1: initial validation

Key components of the initial validation include monitoring the following: the logic of the design; the quality of the data; the selection of variables; the modeling process; the development of results; documentation; programming; and implementation.

Preparatory work for the initial validation is conducted within the Risk Management Department by the units responsible for developing the models as part of their development and improvement work. Operational and managerial oversight of this work (level 1) is also done by these units, under the supervision and responsibility of the CRO.

The Validation of Rating Models unit, under the CRO's responsibility, challenges and monitors in both qualitative and quantitative terms the development and improvement work and the initial validation, (level 2 oversight) and issues an opinion for purposes of the initial validation by the Executive Board's Risk Management Committee (EBRMC).

The EBRMC is responsible for the initial validation of a new model or an improved model, and, by extension, for authorizing its implementation.

Step 2: monitoring the use of models

This refers to the application of models in the Bank's credit and piloting processes.

For the credit process, analysts from the Credit Management Division and the front office are responsible for using the models and thus for calculating the estimators produced by the models. Analysts and the front office are also responsible for ensuring that the estimators are appropriately used in the context of credit decisions (decisions to grant credit as well as pricing decisions). These activities are subject to operational and managerial oversight which is defined by the analysts and the front office (level 1).

For piloting needs, various departments use the estimators produced by these models in the lending process. The Risk Management Department in particular uses rating models to analyze and monitor risk on the loan book and to calculate capital requirements.

Step 3: ongoing validation

Key components of ongoing validation include ensuring appropriate use of the models and compliance with structural and design-related hypotheses, and back-testing performance (precision and discriminating capacity).

Preparatory work for ongoing validation is conducted by the units responsible for developing the models. These units also propose any necessary measures to be taken in response to the results obtained. Operational and managerial oversight of this work (level 1) is carried out by these units, under the supervision and responsibility of the CRO.

As during the initial validation, the Validation of Rating Models unit, under the supervision and responsibility of the CRO, challenges and monitors in both qualitative and quantitative terms the ongoing validation (level 2) and issues an opinion on the results of the ongoing validation and the measures proposed, for ongoing validation by the EBRMC.

The EBRMC is responsible for deciding on the ongoing validation for a given model together with possible measures to be taken in this regard. It is therefore also responsible for authorizing the model's continued use, including constraints and measures to be taken.

Operational principle behind model validation

The core principle underlying the activities of the Validation of Rating Models unit is "close, but independent." Proximity is achieved by involving the unit in the entire process, starting with the initial steps taken by the design teams, both through regular support and regular discussions. Independence is achieved through the use of operational principles overseen by the EBRMC itself.

Role of the Internal Audit Department

For the three steps defined for model monitoring, the Internal Audit Department's work is set out in an independent audit program and involves assessing the organization, processes and methods of levels 1 and 2 of the internal control system.

The segmentation of the Bank's default rating system into groups of counterparties is adapted to the Bank's risk management needs and to its business activities. Within the Bank, both the initial and ongoing model validations are conducted according to these groups. The validation process is distinct from the asset categorization set forth under Basel II.

In order to assess credit facilities and other commitments associated with the various models, the table below shows the correspondence between the scope of application of the default rating models and the Bank's asset categories, for exposures handled under the IRB approach.

Table 17: Exposure (after CCF) by Basel II asset category and by counterparty rating model
in CHF millions, at 31 December 2010, BCV Group (IRB scope)¹³

BCV model	Basel II asset category						Total
	Residential retail	Other retail	Corporates	Specialized lending	Other institutions	Banks	
Individuals ¹	11,480	514	221	-	-	-	12,215
SMEs	951	574	1,852	0	26	-	3,403
Real-estate professionals	-	16	-	4,417	-	-	4,433
Trade finance	-	-	-	1,987	-	-	1,987
Vaud municipalities	-	-	-	-	494	-	494
Joint and several co-debtors	570	11	63	-	80	-	725
Transmission	210	81	638	-	116	-	1,045
Banks	-	-	-	-	-	4,157	4,157
Total	13,212	1,197	2,773	6,404	717	4,157	28,459

¹ Including BCV staff and private banking clients

¹³ In tables 17 to 20, exposures correspond to the credit equivalent following application of the credit conversion factors (CCF) and after taking into account the substitution effect. Exposures relating to securities lending and borrowing are not included in these tables (net exposure of CHF 468m after regulatory haircuts).

Table 18: Exposure (after CCF) to risk in the “corporate, sovereign and bank” portfolio
in CHF millions, at 31 December, BCV Group, IRB scope

Internal counterparty default rating	Exposure		Average risk weighting ¹	
	2010	2009	2010	2009
B1.1	548	1,198	15%	14%
B1.2	1,735	3,067	9%	7%
B1.3	1,799	2,552	15%	14%
B2.1	600	388	24%	30%
B2.2	292	297	40%	39%
B3.1	618	637	50%	51%
B3.2	309	275	64%	63%
B3.3	306	308	73%	75%
B3.4	214	213	83%	83%
B4.1	116	72	94%	92%
B4.2	120	84	100%	104%
B4.3	34	25	108%	112%
B5.1	13	4	128%	136%
B5.2	30	7	169%	161%
B5.3	16	22	105%	94%
B6	35	34	86%	89%
B7	181	243	47%	48%
Total	6,966	9,425	31%	24%

¹ Before applying the specific multiplier M

The average risk weighting on this portfolio (31%) is strongly affected by bank counterparties, which are primarily rated B1.1 to B1.3. Corporate exposures are generally rated B3, implying a higher average risk weighting (around 50%). At 31 December 2010, the average risk weighting was up year-on-year as a result of the reduction in interbank lending over the period.

The average risk weighting for B1.2-rated counterparties is below that of B1.1-rated counterparties because the former are slightly better secured and, consequently, the average LGD and the capital requirements are lower.

The average risk weighting for impaired exposures (counterparties rated B5.3, B6 and B7) is below the average risk weighting of some non-impaired counterparties (B5.2, for example), because the capital requirement is calculated on the basis of the credit exposure less specific provisions created for the position.

Table 19: Exposure (after CCF) to risk in the “residential retail” portfolio
in CHF millions, at 31 December, BCV Group, IRB scope

Internal counterparty default rating	Exposure		Average risk weighting ¹	
	2010	2009	2010	2009
B1.1	0	0	1%	1%
B1.2	67	71	1%	2%
B1.3	288	266	2%	2%
B2.1	2,656	2,362	4%	4%
B2.2	2,740	2,650	7%	7%
B3.1	3,020	2,760	12%	13%
B3.2	2,356	1,871	20%	20%
B3.3	1,077	929	24%	26%
B3.4	401	379	31%	32%
B4.1	228	232	38%	42%
B4.2	145	133	47%	48%
B4.3	94	73	58%	59%
B5.1	16	13	67%	75%
B5.2	14	15	90%	83%
B5.3	10	13	106%	104%
B6	22	24	106%	105%
B7	79	91	91%	86%
Total	13,212	11,883	14%	15%

¹ Before applying the specific multiplier M

Exposure in the “residential retail” portfolio is made up of mortgage loans that are for the most part secured by properties (mainly single-family homes). The resulting average risk weighting is low (14%).

Table 20: Exposure (after CCF) to risk in the “other retail” portfolio
in CHF millions, at 31 December, BCV Group, IRB scope

Internal counterparty default rating	Exposure		Average risk weighting ¹	
	2010	2009	2010	2009
B1.1	-	0	-	10%
B1.2	2	3	6%	5%
B1.3	22	16	8%	9%
B2.1	395	376	5%	5%
B2.2	82	92	26%	25%
B3.1	153	173	44%	42%
B3.2	100	100	52%	54%
B3.3	106	104	67%	68%
B3.4	79	81	80%	76%
B4.1	68	68	85%	86%
B4.2	52	41	96%	97%
B4.3	34	28	93%	87%
B5.1	7	5	95%	93%
B5.2	7	4	83%	72%
B5.3	18	4	102%	84%
B6	10	10	81%	82%
B7	62	86	24%	19%
Total	1,196	1,191	41%	39%

¹ Before applying the specific multiplier M

The “other retail” portfolio is smaller than the previous two portfolios in terms of volume. It is composed of lombard loans to private banking clients (B2.1 rating) and to SMEs that meet the criteria to be handled as retail clients. These SMEs are rated B3, and exposure to them is generally not well secured, which leads to a relatively high average risk weighting for this portfolio (41%).

Table 21: New provisions within the IRB scope
in CHF millions, at 31 December 2010, BCV Group, IRB scope

Portfolio	New provisions	
	2010	Long-term annual average (2003-2010)
Corporates, sovereigns, banks	6	9
Residential retail	2	4
Other retail	4	4
Total	11	17

The new provisions created in 2010 relative to IRB scope exposures are below the long-term annual average. In spite of the unfavorable economic climate, no significant rise in losses was observed within the IRB scope in 2009 and 2010.

Table 22: Internal estimates and observed losses within the IRB scope
in CHF millions, at 31 December 2010, BCV Group, IRB scope¹⁴

Portfolio	Average annual expected loss (in CHF millions)	Average annual observed loss (in CHF millions)	Average annual probability of default	Average annual observed default rate	Average LGD	Average observed loss rate
Corporates, sovereigns, banks	8	6	0.9%	0.9%	37%	19%
Residential retail	5	1	0.4%	0.2%	15%	3%
Other retail	7	4	1.0%	1.0%	52%	17%
Total	20	10	0.8%	0.9%	37%	17%

¹⁴ Expected loss is determined by applying PD, LGD and EAD models to non-impaired exposures at the start of the year. The observed losses on each counterparty that entered into default during the year are determined on the basis of the effective losses for counterparties that have been closed out and on the basis of the provisions created for counterparties that have not been closed out. The average LGD is equal to the estimated LGD at the beginning of the year for counterparties that went into default during the year. The observed loss rate is determined for counterparties that went into default during the year, on the basis of effective losses (closed out) and provisions (not closed out).

Within the IRB scope, the annual observed losses in the period analyzed (2003 to 2010) are lower than the average annual expected losses. The difference is due mainly to an overestimate of the observed loss rate by the LGD model during this unique period, in which there was strong economic growth until 2008 and a favorable property market for property pledges (6% annual rise in prices for single-family homes between 2003 and 2010).

4.3.3 Standard and IRB approaches: Risk reduction

Risk-reduction approaches and procedures are described in section 4.3.

Table 23: Risk-reduction technique: International Standard Approach (SA-BIS)
in CHF millions, at 31 December 2010, BCV Group

Portfolio	Initial exposure (after CCF and provisions)	Substitution effect		Exposure after substitution effect	Secured amounts			Unsecured amounts
		Outflows	Inflows		Financial collateral	Property- related collateral	Other eligible collateral	
Retail	298	-	-	298	26	180	-	92
Corporates	5,151	-271	-	4,880	84	183	-	4,613
National, cantonal and municipal governments	2,838	-6	+231	3,063	-	-	-	3,063
Banks	503	-	-	503	-	-	-	503
Other positions	18	-	-	18	-	-	-	18
Total	8,807	-277	231	8,761	110	363	-	8,288

The impact of risk-reduction measures is low in the scope of the SA-BIS. This is due to the predominance of exposure to large corporates, the Swiss National Bank and Swiss federal and cantonal governments, which are generally not secured.

Table 24: Risk-reduction technique: IRB approach

in CHF millions, at 31 December 2010, BCV Group, excluding specialized lending

Portfolio	Initial exposure (after CCF)	Substitution effect		Exposure after substitution effect	Secured amounts			
		Outflows	Inflows		Financial collateral	Property- related collateral	Other eligible collateral	Unsecured amounts
Residential retail	13,211	-	+1	13,212	14	13,130	-	68
Other retail	1,196	-	-	1,196	406	148	-	641
Corporates – excluding specialized lending	3,027	-106	-	2,921	108	367	8	2,439
National, cantonal and municipal governments	490	-	+71	561	68	51	-	442
Banks	3,633	-	80	3,713	184	-	-	3,528
Total	21,556	-106	152	21,602	780	13,696	8	7,119

IRB-eligible collateral reduces the total exposure by CHF 14,484 million (-67%) after the substitution effect. Property-related collateral associated with mortgage loans is predominant. This concentration is heightened by the fact that most pledged real estate is in Vaud Canton. Property-market stress simulations are regularly carried out in order to take into account the increased risk of loss stemming from a drop in property prices.

4.3.4 OTC derivatives

Limits for OTC derivatives (including forward contracts) are mainly granted to bank counterparties in order to carry out trading operations and interest-rate risk hedging transactions. They are also granted to companies or public-sector entities so that they can hedge typically against exchange-rate and interest-rate risk.

Limits for OTC derivatives are granted according to the lending process and lending authority described in section 4.3. They are monitored daily on an individual basis.

Credit-risk exposure is measured according to the principle of "positive replacement value plus add-on." The replacement value is the position's market value. The add-on is determined by type of underlying and by maturity, on the basis of internal models.

Where the Bank has entered into an ISDA netting agreement with the counterparty, contracts with negative replacement values can be taken into account to reduce credit-risk exposure.

Where the Bank has entered into a CSA collateral management agreement with the counterparty, credit-risk exposure is determined according to the same principle, taking into account the amount of the cash collateral and based on a reduced add-on, in order to take into consideration the frequency of revaluation and the option to make margin calls.

When calculating capital requirements, exposures are determined according to the current exposure method (Basel II Accord, annex IV, figures 91ff), taking account of regulatory add-ons as well as netting and collateral management agreements.

Table 25: Counterparty-risk exposure (OTC derivatives)
in CHF millions, at 31 December 2010, BCV Group

	Parent company					Subsidiaries	Group total
	Banks	Corporates	National, cantonal and municipal governments	Individuals	PC total		
Positive replacement value	694	84	25	5	808	0	808
Netting	-388	-21	-	-1	-410	0	-410
Exposure after netting effects	306	63	25	4	398	0	398
Cash collateral	-78	-	-	-	-78	0	-78
Net exposure	229	63	25	4	320	0	320
Exposure at default (EAD)	942	152	26	8	1,128	0	1,128

The majority of the net exposure (72%) is the result of derivative operations with bank counterparties. Risk-reduction measures (i.e., netting and cash collateral agreements) reduce the exposure by around 60%.

Table 26: Regulatory EAD for OTC derivatives by type of underlying

in CHF millions, at 31 December 2010, BCV parent company, EAD (replacement value plus regulatory add-on)

Underlying assets	EAD before netting and collateral agreements	Impact of netting and collateral	EAD after netting and collateral
Equities	15	-5	10
Fixed income	230	-129	102
Forex	873	-490	383
Gold and other precious metals	9	-7	2
Other	2	-2	-
Total	1,128	-632	496

Forward contracts and derivatives on currencies account for more than 75% of total regulatory EAD. Fixed-income derivatives are mainly swaps entered into to hedge against the Bank's interest-rate risk. The Bank enters into CSA collateral management agreements with its main OTC-derivative counterparties in order to reduce credit risk.

4.4 Non-counterparty-related assets

The notion of non-counterparty-related risk refers to a risk of loss arising from changes in asset values or from the liquidation of assets not linked to a counterparty (e.g., buildings, holdings in real-estate companies and other tangible fixed assets).

Tangible fixed assets are carried at cost and depreciated on a straight-line basis over their estimated useful lives within the following limits: 50 years for real estate, 10 years for technical facilities, 5 years for machinery, furniture and fittings, and 5 years for computer hardware and software.

Asset values are reviewed annually. If there is a decline in value or a change in the useful life, the carrying value of the asset concerned is written down and the residual value is depreciated over the remaining estimated useful life of the asset.

If the factors giving rise to impairment cease to exist, the carrying value of the asset concerned is increased in order to fully or partly eliminate any depreciation in value recorded in preceding periods.

Available-for-sale real estate acquired in connection with credit operations and carried under financial investments is also included in non-counterparty-related assets; it is valued at the lower of cost or market.

Table 27: Capital requirements for non-counterparty-related assets
in CHF millions, BCV Group

	at 31 December 2010			Required capital (before multiplier)	Required capital (after multiplier)	Required capital at 31 December 2009 (after multiplier)
	Balance-sheet position	Risk weighting	Weighted position			
Assets in offset account	3	100%	3	-	1	-
Group premises	256	100%	256	21	62	66
Other real estate and real-estate companies	243	100%	243	19	58	62
Other tangible fixed assets and computer software ¹	247	100%	247	20	59	58
Total	749		749	60	180	186

¹excluding goodwill and other intangible assets and including depreciable assets carried under other assets

4.5 Market risk

4.5.1 Market risk on the trading book

Strategy and process

All trading activities are managed within the Asset Management & Trading Division. A distinction is made between the trading portfolio, which includes all the trading departments' positions, and the financial management nostro portfolio, which is composed of the nostro positions managed by the Asset Management Department.

The trading departments carry out market operations for internal and external counterparties. They also engage in issuing, market-making, arbitrage and directional trading strategies, with a specialization in structured products. Trading positions are limited to underlyings in equities, fixed income, forex and precious metals. The trading departments do not engage in proprietary trading in instruments with commodity underlyings. As part of its new strategy, which was announced in November 2008, BCV completely withdrew from its proprietary equity-derivative trading business line at the end of 2009.

The Asset Management Department is responsible for the financial management nostro portfolio. While this portfolio used to focus on providing a return, it was given a new role under the Bank's new strategy and significantly reduced in 2009 and early 2010. It is now used to assist in the creation of new Asset Management funds, while keeping risk-taking at a minimum. This portfolio may be invested in stocks, bonds, simple derivatives, structured products, funds, and funds of funds. All of these positions (apart from those in funds and funds of funds) are on recognized exchanges or representative markets.

Structure and organization

All new trading products and instruments must be validated by the New Trading Product Committee (NTPC). This committee is chaired by the head of the Risk Management Department and includes the heads of the Asset Management & Trading Division, the Foreign Exchange Department, the Equities, Fixed Income & Structured Products Department and the Back Office Department. The process ensures that before a product is launched, all requirements have been met in the areas of risk management, ALM, treasury management, back offices, legal, compliance, tax and IT.

For all trading positions, the overnight monitoring of market risk is under the responsibility of the Market Risk Unit within the CRO's Risk Management Department. The Market Risk Unit also defines the risk control measures and monitors the appropriateness of risk control for new trading products.

Risk assessment

Various techniques are used to measure risk exposure on the Asset Management & Trading Division's trading portfolio:

- Historical overnight Value-at-Risk (VaR) with a 1-day time horizon and a confidence level of 99%;
- Analysis on potential losses using static stress tests and dynamic 6-month stress tests;
- Sensitivity metrics such as delta, gamma, vega, theta and rho.

Limit utilization is controlled and reported daily by the Market Risk Unit.

Various techniques are used to measure risk on the Asset Management & Trading Division's financial management nostro portfolio:

- Historical VaR with a 6-month time horizon and a confidence level of 99%.
- Analysis of potential losses using static stress tests and dynamic 6-month stress tests;

Capital requirements for market risk on BCV's trading book are determined in accordance with the Standard Approach (CAO, art. 72) without the use of in-house models. For options trading, the calculation is based on the delta-plus method: the market value of the underlying is multiplied by the delta for the options positions. This method also takes gamma and vega into account.

The breakdown of capital requirements by type of underlying shows that exchange-rate risk represented the greatest risk at the end of 2010. This change is associated mainly with currency derivatives for customer-driven forex trading, which grew significantly in 2010. Equity risk is associated primarily with nostro positions managed by the Asset Management Department and, to a lesser extent, with equities managed by the trading departments. Interest-rate risk mainly arises from bond positions.

Table 28: Capital requirements by type of underlying (Standard Approach)
in CHF millions, BCV Group

	at 31 December 2010	at 31 December 2009
Interest-rate risk	6	9
Equity risk	10	15
Exchange-rate risk	15	4
Commodity risk	0	0
Total	31	28

4.5.2 Risk on equity securities on the banking book

Equity securities on the banking book are recorded on the balance sheet in the line items Financial investments and Holdings; they are valued in accordance with the Directives governing the preparation of financial statements (FINMA circular 2008/2).

Strategy and processes

Financial investments are composed of strategic holdings with a long time horizon that are acquired in accordance with the Bank's strategy. The Bank defined an upper limit of CHF 200m for these equity securities and, in principle, does not invest directly in private-equity positions.

The authority to acquire and change long-term holdings is held by the Executive Board for holdings of up to CHF 20m and the Board of Directors for larger amounts. The Board of Directors has responsibility for setting up and selling subsidiaries.

Table 29: Equity securities on the banking book
in CHF millions, at 31 December 2010, BCV Group

	Book value	Fair value	Compulsory reserves ¹			Profit or loss on disposals in 2010
			31/12/10	31/12/09	Change	
Listed shares	32	97	65	78	-13	1.3
Unlisted shares	15	15	1	1	0	2.4
Private equity	16	24	8	9	-1	1.3
Total	63	136	73	88	-15	5.1

¹ Reserves on equity securities carried under financial investments valued at lower of cost or market

Risk assessment

Equity securities included in financial investments are mainly listed or unlisted shares and fund units that are not held for trading purposes or for long-term investment. They are valued at lower of cost or market.

Long-term investments comprise corporate equity securities, including real-estate companies, which are held as long-term investments irrespective of voting rights. They also include the Group's infrastructure-related holdings, particularly joint ventures. Holdings of less than 20%, companies of no material significance, subsidiaries that are not in the financial services industry and investments held purely with a view to their subsequent sale are not consolidated. They are stated at cost, less appropriate depreciation.

With regard to capital requirements, equity securities held as financial investments are risk-weighted, while non-consolidated holdings in the financial services industry are deducted from capital (see section 1.2 above).

Table 30: Capital requirements for equity securities
in CHF millions, BCV Group

	at 31 December 2010							Required capital at 31 December 2009 (after multiplier)
	Balance-sheet position	Commitments relating to equity securities	Total	Risk weighting	Weighted position	Required capital (before multiplier)	Required capital (after multiplier)	
Listed shares	32	-	32	290%	92	7	10	9
Unlisted shares	15	90	105	370%	388	31	41	48
Private equity	16	6	22	190%	41	3	4	6
Total	63	96	158		521	42	55	63

4.5.3 Interest-rate risk on the banking book

Strategy and processes

The Board of Directors establishes the Bank's principles for managing risk and decides on the strategy it will pursue in taking on risk, which includes the target profile for interest-rate risk on the banking book (IRRBB). The target interest-rate risk profile is defined in the Financial Strategy and reviewed annually as part of the Risk Management Policy and Strategy (RMPS). The process for defining the IRRBB target profile is guided by limits approved by the Board of Directors in the form of equity duration and VaR.

Structure and organization

The Executive Board is responsible for organizing and implementing IRRBB management. The Executive Board delegates management of this type of risk to its Asset and Liabilities Management Committee (ALCO). This committee meets monthly. It is chaired by the CEO and comprises three other Executive Board members, including the CFO.

Within the Finance & Risks Division, IRRBB management is centralized by the ALM & Financial Management (ALM-FM) Department, which reports directly to the CFO. This department is responsible for:

- Defining and maintaining the models and principles used to manage IRRBB as part of the Bank's Financial Strategy. These models and principles are approved by the Executive Board's Risk Management Committee and by the Board of Directors.
- Producing monthly reports on IRRBB management and presenting them to the ALCO. This report is also presented to the Executive Board and the Board of Directors each quarter.

Risk assessment

The ALM-FM Department continuously manages interest-rate risk for the parent company's entire banking book.

Interest-rate risks from trading activities represent market risks and are outside the scope of IRRBB.

Interest-rate risk relating to the activities of Banque Piguet is managed independently by Banque Piguet's Executive Board.

Each quarter, the interest-rate position for the entire Group is determined by the ALM-FM Department, in accordance with the approach used by the parent company. It is then presented to the ALCO, the Executive Board and the Board of Directors.

At 31 December 2010, in terms of sensitivity, the parent company's IRRBB accounted for 98% of the Group's IRRBB position.

Within the parent company, interest-rate risk positions are consolidated through internal analyses to systematically hedge business activities against interest-rate risk.

Interest-rate reset frequencies are determined on the basis of the operations' contractual features and take account of replicating models for variable-rate loans, savings, sight accounts and debit accounts. For non-maturing products, clients' historical behavior is also taken into consideration when determining replicating models. Options positions are converted into the delta equivalent in terms of interest-rate positions. Agreements and modeling processes are reviewed annually by the ALM-FM and approved by ALCO.

Risk positions are measured on a monthly basis using two types of indicators:

- Static indicators, which measure the sensitivity of the net current value of the banking book, including.
 - the current value of equity capital;
 - the sensitivity of the economic value of equity capital to an interest-rate change of 100bp;
 - the duration of equity capital;
 - the VaR of the net current value of the banking book;
 - key rate durations.
- Dynamic indicators, which measure the sensitivity of the interest margin to interest-rate fluctuations. These indicators simulate the interest margin over the following three years. These simulations show how various balance-sheet items may vary in the future depending on changes in interest rates and client behavior. These simulations also include calculations of the value and duration of equity capital at future dates

Risk reduction

The hedging products that are most commonly used are interest-rate swaps. Options positions on the banking book are systematically hedged through market operations.

Table 31: Sensitivity to interest-rate changes

in CHF millions, the parent company, impact of a 100bp rate hike on the economic value of equity capital

	Less than 3 months	3-12 months	1-4 years	4-7 years	More than 7 years	Total
at 31 December 2010	2.4	23.1	-26.8	-119.0	-74.9	-195.2
at 31 December 2009	-0.6	11.9	-51.3	-100.2	-26.6	-166.8

As the Bank is essentially exposed to rises in interest rates, only rate increases are simulated.

4.6 Operational risk

Strategy and processes

Exposures to operational risks result from the Bank carrying out its activities and are not actively sought after.

The Bank seeks to manage operational risk in an efficient manner, ensuring an appropriate balance between controlling operational risk on the one hand and the related investment/costs to the Bank on the other.

The aim of operational risk management is to assist employees and Management in controlling operational risk factors by helping them to reinforce the operational and management control system. In particular, the Bank aims to reduce its exposure to:

- Inappropriate or malicious behavior of employees, suppliers, bank counterparties, customers or other parties external to the Bank;
- Inappropriate characteristics of IT (applications, interfaces and hardware) or communication systems (telephone, fax, etc.);
- Inappropriate infrastructure;
- An organization – combining both the conceptual framework (methods, processes, corporate structure, etc.) and the organizational framework (rules, policies, directives and manuals) – that is not suited to the Bank's activities.

Structure and organization

The Operational Risk Unit within the Risk Management Department is in charge of conducting periodic operational-risk self-assessments and gathering information on operational incidents that have occurred. This unit develops the methods used for managing operational risk and submits them for approval to the Executive Board's Risk Management Committee. The unit is also responsible for implementing these methods. In addition, the Operational Risk Unit contributes to creating and implementing assessment methods and tools for the Bank's internal control system.

Operational risk assessment and analysis of operational incidents

In order to anticipate the main operational risks, Management and the business lines carry out periodic self-assessments to determine the Bank's exposure to operational-risk sources and events and the effectiveness of the controls in place. The aim of these self-assessments is to reveal possible improvements to operational and managerial controls.

As a result, the Operational Risk Unit draws up a summary report at the end of each self-assessment campaign and submits it to the Executive Board as well as to the management team of each business line. This report provides recommendations on the main areas of improvement for internal controls.

In addition to anticipating risks, the Bank exhaustively and systematically gathers information on and analyzes the main operational incidents arising from the Bank's activities. These incidents are recorded in a dedicated operational risk management system and analyzed on a monthly basis by the Executive Board, the Risk Management Department and the Bank's business line heads in order to improve internal controls. Whenever possible, the Bank manages major operational incidents according to pre-defined action plans.

Since the Basel II Accord came into force, the Bank has determined its regulatory capital requirements for operational risk in accordance with the Standard Approach (see article 81 of the Capital Adequacy Ordinance). Under this approach, the Bank allocates income to the eight business segments set forth by the regulator.

Table 32: Capital requirements for operational risks
in CHF millions, BCV Group

Business segments	Weighting	at 31 December 2010		Required capital at 31 December 2009
		Average operating income	Required capital	
Corporate finance/advisory	18%	15	3	2
Trading	18%	87	16	15
Private clients	12%	276	33	35
Corporate clients	15%	325	49	50
Payment and settlement	18%	15	3	2
Deposits and fiduciary deposits	15%	49	7	8
Institutional asset management	12%	163	20	21
Brokerage	12%	36	4	5
Total			134	138

Internal control system

The Bank's internal control system (ICS) covers all organizational, procedural, methodological and reporting-related activities that are fundamental to the Bank's proper functioning. The ICS is the responsibility of all managerial and monitoring staff, i.e., the front line, risk management, compliance, controlling and security.

In accordance with the disclosure and reporting requirements set forth in FINMA circular 2008/24, the Bank carries out a review at least annually of key risks and controls, keeps records for each department and identifies the main areas of potential improvement. Each year, the Bank assesses its ICS and submits a report to the governing bodies. It also submits an annual assessment of its ICS for the financial accounts in order to meet the requirements of Swiss auditing standard No. 890.

5. APPENDICES

5.1 Table of correspondence

Part 4 of the Basel II Accord defines the minimum disclosure requirements. The relationship between the tables in the Accord and those in this report is described below:

Table 33: Table of correspondence

Subject	Basel II Accord, part 4	BCV's Pillar 3 report
Scope of application	Table 1, letter (a)	Section 1.2
	Table 1, letter (b)	Section 1.2, tables 1 and 2
	Table 1, letter (c)	Section 1.2
	Table 1, letter (d)	Section 1.2
	Table 1, letter (e)	Section 1.2
	Table 1, letter (f)	Section 1.2
Capital structure	Table 2, letter (a)	Section 2
	Table 2, letter (b)	Section 2, table 3
	Table 2, letter (c)	Section 2, table 3
	Table 2, letter (d)	Section 2, table 3
	Table 2, letter (e)	Section 2, table 3
Capital adequacy	Table 3, letter (a)	Section 3
	Table 3, letter (b)	Section 3, tables 4, 5 and 6
	Table 3, letter (c)	Section 3, table 4
	Table 3, letter (d)	Section 3, table 4
	Table 3, letter (e)	Section 3, table 4
	Table 3, letter (f)	Section 3, table 4
Credit risk	Table 4, letter (a)	Section 4.3
	Table 4, letter (b)	Section 4.3, table 7
	Table 4, letter (c)	Section 4.3, table 7
	Table 4, letter (d)	Section 4.3, table 8
	Table 4, letter (e)	Section 4.3, table 9
	Table 4, letter (f)	Section 4.3, tables 10 and 11
	Table 4, letter (g)	Section 4.3, table 12
	Table 4, letter (h)	Section 4.3, table 13
	Table 4, letter (i)	Section 4.3, table 14
	Table 5, letter (a)	Section 4.3.1
	Table 5, letter (b)	Section 4.3.1, tables 15, 16 and 30
	Table 6, letter (a)	Section 4.3.2
	Table 6, letter (b)	Section 4.3.2
	Table 6, letter (c)	Section 4.3.2
	Table 6, letter (d)	Section 4.3.2, tables 18, 19 and 20
	Table 6, letter (e)	Section 4.3.2, table 21
	Table 6, letter (f)	Section 4.3.2, table 22
	Table 7, letter (a)	Section 4.3
	Table 7, letter (b)	Section 4.3.3, tables 23 and 24
	Table 7, letter (c)	No credit derivatives
	Table 8, letter (a)	Section 4.3
	Table 8, letter (b)	Section 4.3.4, tables 25 and 26
	Table 8, letter (c)	No credit derivatives
	Table 8, letter (d)	No estimate of alpha factor
	Table 9	No securitization

Market risk	Table 10, letter (a)	Section 4.5.1
	Table 10, letter (b)	Section 4.5.1, table 28
	Table 11	No internal model
Operational risk	Table 12, letter (a)	Section 4.6, table 32
	Table 12, letter (b)	No advanced approach
	Table 12, letter (c)	No advanced approach
Equities	Table 13, letter (a)	Section 4.5.2
	Table 13, letter (b)	Section 4.5.2, table 29
	Table 13, letter (c)	Section 4.5.2, table 29
	Table 13, letter (d)	Section 4.5.2, table 29
	Table 13, letter (e)	Section 4.5.2, table 29
	Table 13, letter (f)	Section 4.5.2, table 30
Interest-rate risk on the banking book	Table 14, letter (a)	Section 4.5.3
	Table 14, letter (b)	Section 4.5.3, table 31

5.2 Analytical classifications

This section describes the different analytical classifications used in this document that are not already defined within the framework of the Basel II Accord.

Table 34: Type of counterparty

Type of counterparty	Description
Retail	Individuals with up to CHF 250,000 in assets or income, or a mortgage loan of up to CHF 1.2m
Private banking	Individuals who meet at least one of the following criteria: assets above CHF 250,000, income above CHF 250,000, or a mortgage loan above CHF 1.2m
SMEs	Small and medium-sized businesses, excluding real-estate professionals and trade-finance counterparties, that employ up to 150 people, are not listed on the stock exchange and have annual revenues of below CHF 50m
Real-estate professionals	Individuals or entities whose main professional activity involves buying and selling real estate or real-estate development, management or rental
Large Corporates	Listed companies that meet at least one of the following criteria (excluding trade-finance counterparties): more than 150 employees or annual revenues of at least CHF 50m
Public-sector entities	Swiss national, cantonal and municipal governments
Trade finance	Non-bank counterparties involved in trade-finance activities
Banks	Bank counterparties

Table 35: Basel II asset categories (IRB)

Asset category	Description
Residential retail	Mortgage-backed exposure to individuals or to companies that meet the retail criteria
Other retail	Other exposure to individuals or to companies that meet the retail criteria
Corporates	Companies that do not meet the retail criteria The mortgage-bond bank and the central mortgage-bond institution
Specialized lending	Real-estate financing for counterparties rated with the “real-estate professionals” rating model, together with trade-finance operations
Sovereigns	The Swiss national government, BIS, central banks, multilateral development banks eligible for a 0% risk weighting, and foreign governments
Other institutions	Cantonal governments and municipal authorities
Banks	Bank counterparties

Table 36: Counterparty rating model (scope of IRB-F approach)

BCV rating model	Description
Individuals	<p>Combines the following rating models, which are applied to individuals or co-debtors without commercial financing:</p> <ul style="list-style-type: none"> • Private banking: private banking counterparties with at least CHF 300,000 in assets at BCV or who are financed solely on the basis of lombard loans • BCV employees: counterparties employed by BCV Group • Individuals model: counterparties not included in the above private banking and BCV employee groupings
SMEs	Corporate counterparties that are outside the scope of the models for real-estate professionals, large corporates and trade finance
Real-estate professionals	Individuals or entities that are mainly active in real-estate development or investment for their own account
Trade finance	Transactions carried out to finance international commodities trading
Vaud municipalities	Municipal authorities in Vaud Canton
Joint and several co-debtors	One or several individuals or companies, where the co-debtors have at least one credit line
Transmission	Counterparty whose rating was transferred from another counterparty under a system of rules
Banks	Bank counterparties

5.3 List of abbreviations

ALCO	Asset and Liabilities Management Committee
ALM	Asset and Liability Management
ALM-FM	The Bank's ALM and Financial Management Department
BCV	Banque Cantonale Vaudoise
BIS	Bank of International Settlements
BIS capital ratio	The ratio between eligible capital and risk-weighted assets, without taking into account the additional capital buffer required by FINMA. It is determined by multiplying the BIS capital adequacy ratio (eligible capital divided by the capital required by the BIS) by 8%.
BoD	Board of Directors
CAO	Ordinance of 29 September 2006 concerning capital adequacy and risk diversification for banks and securities traders (known as the "Capital Adequacy Ordinance," CAO)
CCF	Credit conversion factor
CCO	Chief Credit Officer
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CLS	Continuous linked settlement
COREP	Common Reporting framework for Basel II Pillar 1
CRO	Chief Risk Officer
CSA	Credit Support Annex, an optional annex for ISDA netting agreements
EAD	Exposure at default
EBCC	Executive Board Credit Committee
EBRMC	Executive Board Risk Management Committee
FINMA	Swiss Financial Market Supervisory Authority
FINMA capital ratio	The ratio between eligible capital and risk-weighted assets. It is determined by multiplying the FINMA capital adequacy ratio (eligible capital divided by the capital required by FINMA) by 8%.

ID	BCV's "in default" provisioning category
IRB-F	Internal Ratings-Based Foundation approach
IRRBB	Interest-rate risk on the banking book
ISDA	International Swaps and Derivatives Association
LGD	Loss given default
NTPC	BCV's New Trading Products Committee
OTC	Over-the-counter
PC	Parent company
PD	Probability of default
PSE	Public-sector entities
RD	BCV's "reputed to be in financial difficulty" provisioning category
RMPS	BCV's Risk Management Policy and Strategy
SNB	Swiss National Bank
SA-BIS	International Standard Approach in accordance with the CAO
VaR	Value at risk